# Selected Rehabilitation Facilities

## IN THE UNITED STATES:

## AN ARCHITECT'S ANALYSIS

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# Foreword

This publication is a valuable addition to the resources available in the field of planning and design of rehabilitation facilities. It should be helpful to architects, planning groups, and to the facility administrator planning to build, to renovate, or especially, to add a new service.

During the course of the study upon which this publication was based, Mr. Fitz Patrick surveyed many rehabilitation facilities. These facilities were widely varied in their geographical locations, architectural styles, and facility services. Because he viewed them through the eyes of an architect, Mr. Fitz Patrick has provided us with an appreciation of the aesthetic as well as the functional qualities of the well planned rehabilitation facility. The comprehensive programs represented in these pages also should serve as a reminder of the responsiveness, the range of services, and the versatility of the rehabilitation program.

Edward Newman

EDWARD NEWMAN, Commissioner
Rehabilitation Services Administration

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The material in this publication was gathered in a nationwide survey made by the author under Research Fellowship RF 316, for the Office of Research, Demonstration and Training, Social and Rehabilitation Service, U.S. Department of Health, Education and Welfare. The points of view expressed throughout the body of this publication and through Appendix I are those of the author and do not necessarily represent the views of the U.S. Department of Health, Education or Welfare or of the various State health, education or rehabilitation agencies.

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# Selected Rehabilitation Facilities

## IN THE UNITED STATES:

## AN ARCHITECT'S ANALYSIS

by
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# Introduction

This publication is based on a research study which attempted to seek out and identify the rehabilitation facilities in the United States where new and progressive concepts in programming for rehabilitation are in operation or under consideration. The fundamental objective of this study was to formulate, in a reference document, the most advanced ideas in the planning and design of rehabilitation facilities.

Based on a similar research experience in Europe, it was decided that the travel necessary to this study could best be accomplished by automobile. The map shows the route that was followed. Strong justification for this procedure became apparent during the course of this travel.

Geography, topography, climate and ecology directly affect the siting and character of rehabilitation facilities. Method and availability of transportation, distribution of population, and employment characteristics are also important in the logistics of locating and planning facilities for rehabilitation. Differences created by these factors result in widely varying solutions to the problems of rehabilitation and to the design of the buildings needed to house different types of programs.

**ITINERARY FOR SITE VISITS**

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# Planning the Rehabilitation Facility

## State and Regional Planning For Rehabilitation Facilities

A comprehensive investigation of the facilities for the rehabilitation of the disabled in the United States reveals that, at the present time, such facilities are inadequate; not only numerically, but also in the quality of the facilities in operation. The statistical listing of rehabilitation facilities in operation, State by State, is often misleading. Some of the programs are small marginal operations, inadequately housed, and at times dependent on part-time or voluntary staff for operation.

In the future, many new rehabilitation facilities will undoubtedly be built in or near urban centers where greater service can be provided for large numbers of disabled persons. Other trends, particularly in urban areas, will be the location of facilities adjacent to acute care hospitals, with direct service connections, and the development of rehabilitation complexes which will house a number of agencies and will provide many rehabilitation services. However, there will still be a need for regional centers in certain areas where travel distances or geographical characteristics impede movement of people toward urban centers and where rehabilitation services are needed in the less populated sections.

Site selection for new facilities will be of critical importance. In the past, the selection of sites for use as rehabilitation facilities has too often been made on the basis of existing circumstances rather than on rational judgment following a careful examination of the problem and the alternatives available. (Several such examples have been cited in this publication.)

Today there exist the instruments and informational sources to determine the appropriate areas which should be selected for future sites for rehabilitation facilities. Virtually every State has a State planning agency which has collected and documented information on population growth trends, industrial expansion, proposed land use control, future highway and transportation development, statistics on per capita income and unemployment, as well as other determinants which could affect the site selection for health facilities. There are also Regional planning agencies which develop similar information on a Regional basis in cooperation with the State agency. Reinforced with this total information, a rational basis could be conceived for the indentification and site selection for future rehabilitation facilities of all types.

## Project Planning

Each new comprehensive rehabilitation facility which is planned presents problems which, to a greater or lesser degree, are unique to such a facility. These problems may be related to climate, geography, population characteristics, types of disabilities to be treated, the availability of certain necessary staff, as well as the services and equipment which may be available in the immediate area.

Careful planning should be undertaken to develop a program which should form the basis for the overall plan of the building or buildings needed for a facility. Persons involved in such an investigation should include the director of the facility, the architect, principal staff members of the several departments of the facility, and consultant experts in specialties such as food services, vocational training, and special therapy areas. The cost of such program preparation is modest in comparison with the total budget needed to construct a comprehensive rehabilitation facility today.

Where this procedure has been used, the resulting building designs have reflected progressive and appropriate solutions and the reduction of errors and faulty design. In this process, comparative evaluations can be made between alternative proposals for plan relationships, structural systems, and multistory versus single story buildings. Also, the selection and testing of materials can be developed.

Sufficient time should be allowed for investigation into experimental and untried solutions for those phases of the program which are subject to research. Such investigation and research is frequently impossible under the usual time and contract stipulations of a project. The design of rehabilitation facilities is a relatively new field, and research is still needed to produce more appropriate designs of a functional and forward looking character.

Approximately six months "lead time" should be allowed for project investigation. The result will provide the basis for better design, and a better building will result at no increased cost and often at a reduced figure from the projected budget.

Staff participation in the programming and planning procedure usually proves to be helpful in establishing strong morale among the staff. It should also result in the avoidance of minor errors, as well as the reduction of criticism by staff members who have assumed the responsibility for decisions affecting the planning of particular departments.

A project planning process is even more important when it is necessary to design and construct the proposed facility in stages. In such cases a comprehensive

total plan should be developed in order to establish fundamental decisions on the entire building complex. This master plan should be flexible and subject to minor adjustments during the development of the entire building program. If properly conceived, it could represent the basic philosophy of the function of the rehabilitation facility.

## Architectural Design of the Rehabilitation Facility

To be successful and provide positive favorable reaction, any building or related group of buildings should be visually coherent. This is most important in the design of a comprehensive rehabilitation facility since it represents a total living experience for the client who must be in residence for a period of several months. In such a facility the architectural elements vary from the intimate scale of the residence room to the large areas for dining and food service; from areas designed for impersonal recreational group activities or training to special medical and treatment sections. However, in a group plan, the individual elements which vary in function should not be vastly disparate in appearance.

The plan should be functional but the buildings should have an inviting personal and particular quality, and at the same time avoid the superficial and false "homey touch." The resident rooms must insure privacy for the client and also encourage group social contact and identification. They should help in upgrading the individual to acceptable social patterns and behavior. Similarly, the therapy areas must protect the dignity of the individual and at the same time help him to overcome the inhibitions which often accompany disabilities.

The vocational shops should be designed in a manner similar to contemporary light industrial architecture. They should be clean, well lighted, colorful areas with the necessary environmental controls to insure comfort. Noise should be controlled and zoned to avoid conflict with work areas requiring quiet environment. Dirt and dust should also be controlled and kept within the limits of tolerance appropriate to the task being carried on in particular areas.

Open, easy circulation, within and between buildings, is necessary and should be accomplished without introducing an over protective result, either in materials, surfaces, or areas of movement such as walks, corridors, stairways, and ramps. A certain element of hazard must exist, to approximate the normal conditions of everyday life.

The architectural quality of the buildings can provide a form of therapy. The client should be happy in his surroundings, appreciative of the kinds and varieties of spaces available to him, and stimulated by the environment which has been created by the buildings and the program they serve. Where this is successfully accomplished, the client invariably treats the buildings and equipment with respect and does not abuse, damage or use them carelessly. The enjoyment and appreciation of his environment can be very effective in setting up good mental attitudes in the client.

## Selected Examples of Rehabilitation Facilities (By Category)

In order to establish an appropriate and meaningful basis for evaluating and comparing rehabilitation facilities, it was necessary to define specific categories within which such comparative evaluations could be made, as follows:

**THE COMPREHENSIVE REHABILITATION FACILITY**

**In an Urban Setting**

**In a Regional Setting**

**THE REHABILITATION FACILITY WITH SPECIAL DISABILITY OR PROGRAM EMPHASIS**

**For Communications Disorders**

**For the Blind**

**For the Mentally Retarded and Emotionally Disturbed**

**For Rehabilitation Research**

**The Workshop**

**THE REHABILITATION FACILITY DIRECTLY RELATED TO A HOSPITAL**

**As a Separate and Autonomous Facility**

**As a Division Within a Hospital**

**THE REHABILITATION HOSPITAL**

Although many of the facilities described in this publication could have been assigned to more than one category, those that have been selected, in the opinion of the author, represent facilities where the architectural design is particularly well suited to the function of the facility, as categorized.

For an additional listing of significant rehabilitation facilities in each category the reader is referred to Appendix I.

# THE COMPREHENSIVE REHABILITATION FACILITY

## In an Urban Setting

Public transportation as well as cultural, social, vocational and medical services, all available to a greater degree in the city than in rural areas, provide strong arguments for the construction of rehabilitation facilities in or near urban areas, where they can serve large numbers of disabled persons.

# THE COMPREHENSIVE REHABILITATION FACILITY

## In an Urban Setting

### VOCATIONAL GUIDANCE AND REHABILITATION SERVICES

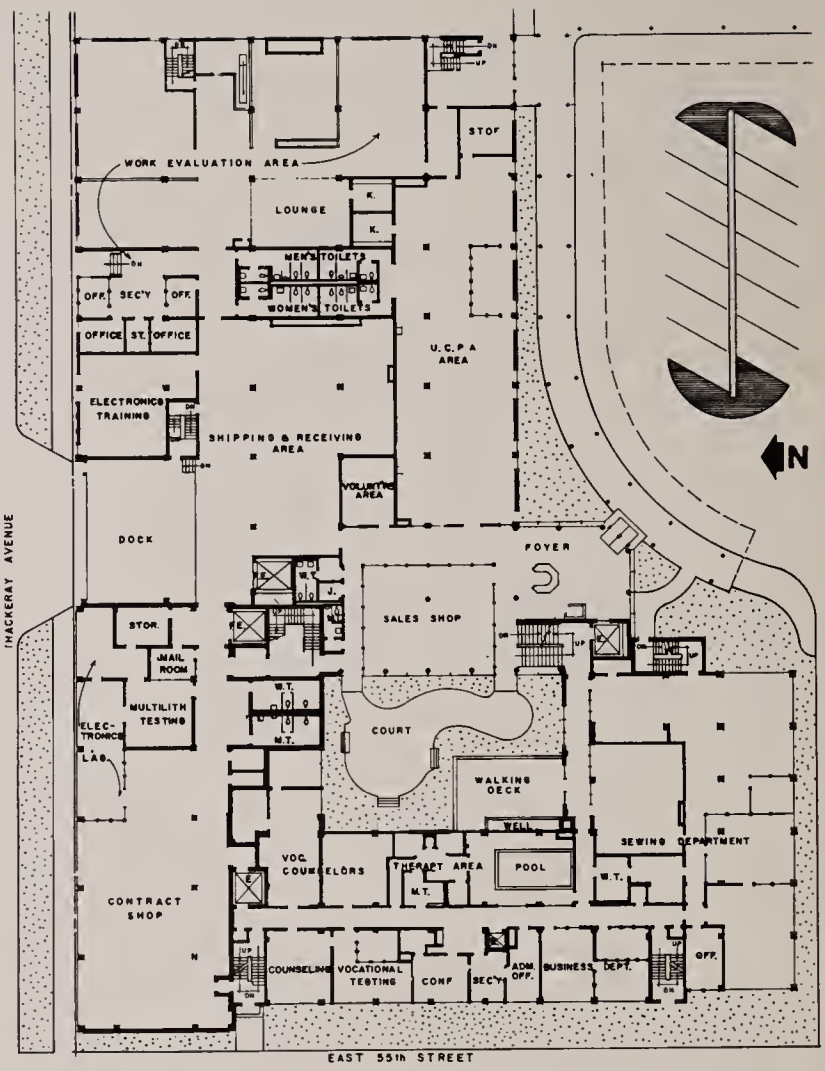
**Cleveland, Ohio**

*Architects:*
**The Ward Partnership**

This is a progressive, well planned rehabilitation facility located in the heart of a large urban area. It is a vital part of the Cleveland Rehabilitation Complex, which, when completed, will house many rehabilitation agencies and will provide a wide variety of services, possibly including a short-term high-rise residence for handicapped persons. Some of the agencies which are, or will be, part of the Rehabilitation Complex are Goodwill Industries, Society for the Blind, branch offices of the Ohio Bureau of Vocational Rehabilitation, and United Cerebral Palsy Association.

VGRS, the first unit to be completed in the Complex, has shown steady growth and expansion during its 20 years of development under dynamic and imaginative leadership. Beginning with the first stage of its present facility, it has been expanded to twice its original size. The building expansion has provided an attractive and well landscaped central court around which the various elements of the center are grouped. Although VGRS does not at present have resident dormitory facilities, or permanent full time medical staff, it has developed a strong medical and vocational evaluation and rehabilitation program which includes an excellent training division as well as a good contract workshop. Its vocational guidance and counseling services section is well planned and works most efficiently with its work evaluation and adjustment section. VGRS has also provided short-term workshop training programs for supervisors as well as internships for students in the rehabilitation disciplines. It has reached out into the inner city neighborhood where it is located and has taken an active role in housing renovation and other projects.

The importance of this facility lies in the way its location and expansion were considered in relation to the development of a comprehensive rehabilitation complex as well as the overall growth and planning program of the city of Cleveland. In many ways it is a model of what a progressive urban facility for rehabilitation services should be in future programming.

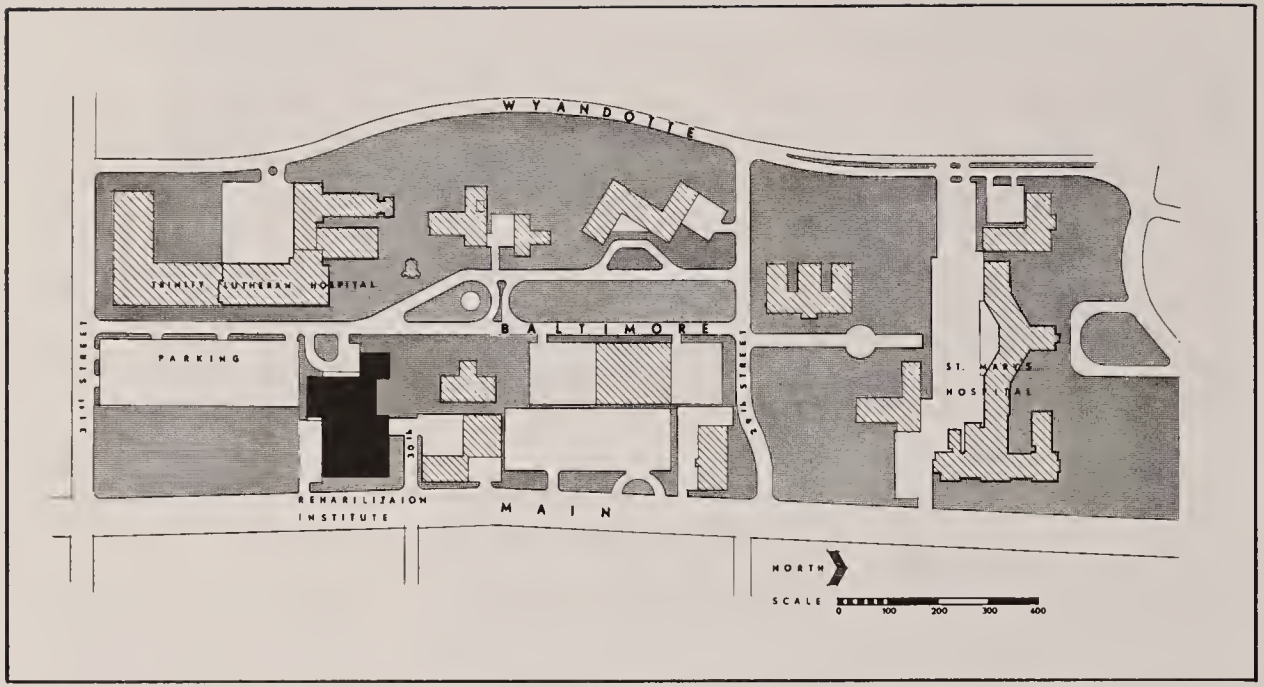



FIRST FLOOR PLAN

1. Vocational Guidance and Rehabilitation Services.
2. United Cerebral Palsy Association.
3. Cleveland Rehabilitation Work Center; Hi-Rise Residency.
4. Cleveland Rehabilitation Work Center; Core Center.
5. Cleveland Society for the Blind.
6. Goodwill Industries.

# THE COMPREHENSIVE REHABILITATION FACILITY

## In an Urban Setting



### REHABILITATION INSTITUTE

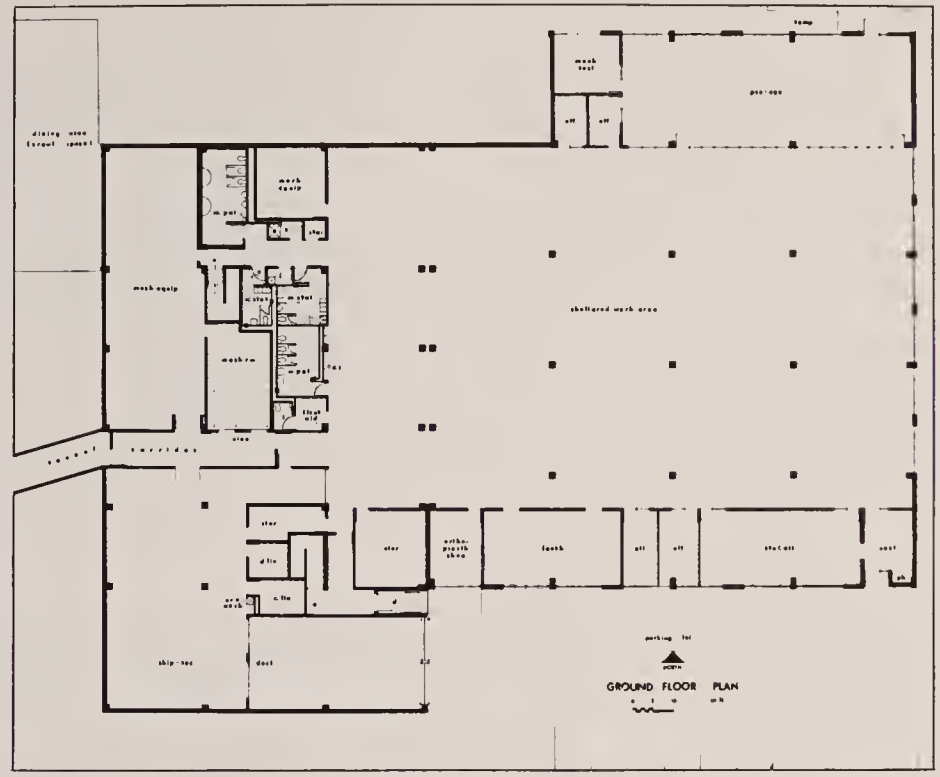
**Kansas City, Missouri**

*Architects:*
**Angus McCallum and Associates**

From modest beginnings in 1947, with progressive leadership, this facility attracted the support and interest of many civic and voluntary societies in Kansas City. Started as an outpatient service facility, it expanded rapidly and had to rent additional space during its expansion.

In 1965 a new building was started. Completed late in 1968, it exemplifies the new trend in the planning of a comprehensive rehabilitation facility with a direct relationship to the acute care hospital which lies adjacent to it. A direct service tunnel provides ready access for staff as well as food and other services.

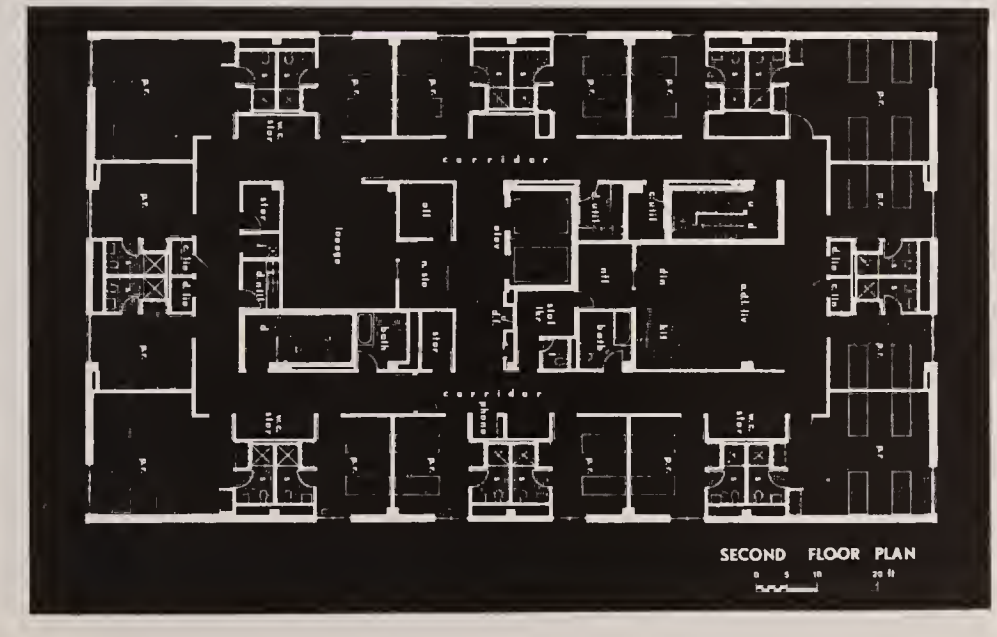
The Rehabilitation Institute has been designed with great skill and understanding. There are three separate activity areas. The ground floor, at the Main St. level, includes the industrial contract workshop and related areas, as well as the prevocational evaluation unit. The first floor, at the Baltimore Avenue level, is devoted to diagnostic and treatment areas, administrative offices and cafeteria, while




accommodations and services for 40 in-patients are located on the second floor. The design not only allows room for expansion but shows recognition of all phases of proposed changes in the urban planning of Kansas City.

The Institute offers a complete program of medical (including speech and hearing) therapy, psycho-social and vocational evaluation, training, work adjustment and placement services for all its clients. Training of professional personnel in the various rehabilitation disciplines is provided through clinical affiliations with universities and colleges as well as by short-term programs.

Like the VGRS in Cleveland, the Rehabilitation Institute represents the newest thinking in terms of an architectural statement of an urban comprehensive rehabilitation facility designed for the central city.



# THE COMPREHENSIVE REHABILITATION FACILITY

## In an Urban Setting

### DALLAS REHABILITATION INSTITUTE

**Dallas, Texas**

*Architect:*
**Howard R. Meyer, F.A.I.A.**

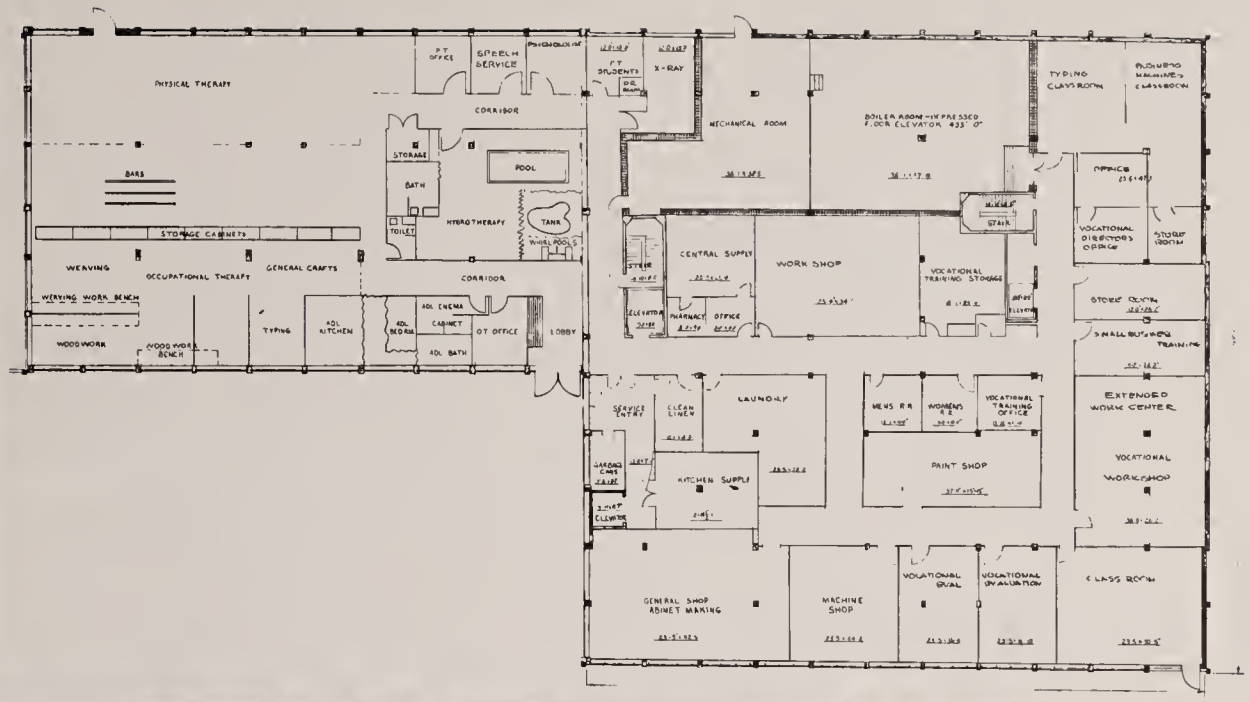
The Dallas Rehabilitation Institute is headquartered at the Caruth Memorial Rehabilitation Center. The Center houses the medical program and a portion of the vocational programs conducted by the Institute. Special evaluation and work training programs for the mentally retarded are also conducted in two satellites located in appropriate areas of the Dallas community. Additional satellite programs may be added in the future.

The central facility, the Caruth Memorial Rehabilitation Center, constructed in 1961, is spacious and modern in design. Bordering the grounds of the Brookhollow Country Club, it is readily accessible to Dallas' major medical complex. The facility is located on a sloping site which allows for full functional use of the ground floor. There is ease of access at all levels and convenient ample parking.

The second floor provides thirty-four licensed hospital beds and a sixteen bed dormitory, as well as a cafeteria and offices. The first floor includes services in physical, occupational and speech therapy, guidance and counseling, vocational evaluation and training (in a variety of business and craft areas), and a contract workshop.

The Dallas Rehabilitation Institute is affiliated with the University of Texas Southwestern Medical School as a teaching and research facility with responsibilities which include in-service programs, resident physician, clinical and short-term graduate training programs in the rehabilitation disciplines, as well as intramural and inter-agency joint research.

This is another excellent example of a well located, urban comprehensive rehabilitation facility with a progressive and expanding program.

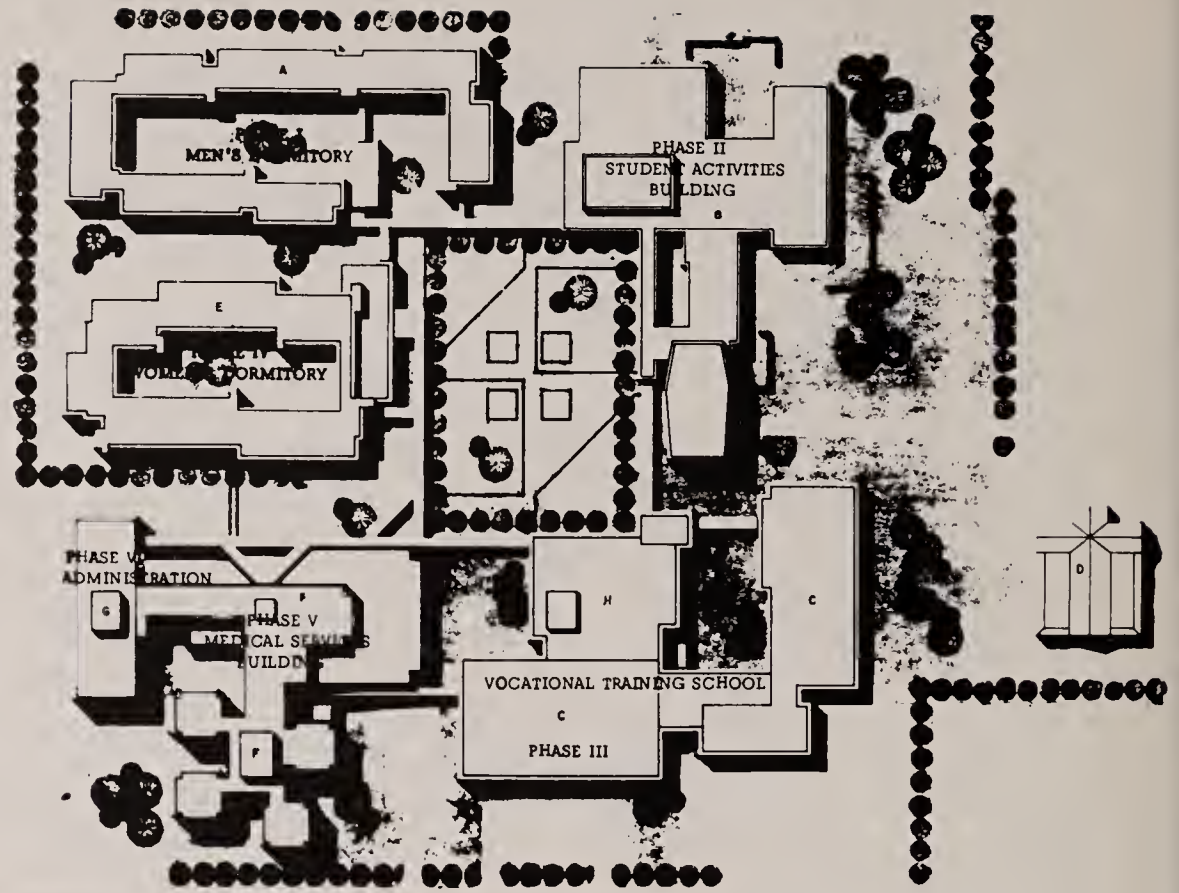

PHYSICAL THERAPY
PT OFFICE
SPEECH SERVICE
PSYCHOLOGIST
CORRIDOR
STORAGE
BARS
POOL
BATH
HYDROTHERAPY
TANK
WHIRLPOOL
TOILET
STORAGE CABINETS
WEAVING
OCCUPATIONAL THERAPY
GENERAL CRAFTS
CORRIDOR
WEAVING WORK BENCH
WOODWORK
WOODWORK BENCH
TYPING
ADL KITCHEN
ADL BEDRM
ADL CINEMA
CABINET
ADL BATH
OT OFFICE
LOBBY
PT STUDENTS
DR. ROOM
X-RAY
MECHANICAL ROOM
BOILER ROOM-HI PRESSED
ELEVATOR 433'-0"
TYPING CLASS ROOM
BUSINESS MACHINES CLASSROOM
OFFICE
VOCATIONAL DIRECTOR'S OFFICE
STORE ROOM
STAIR
CENTRAL SUPPLY
WORK SHOP
VOCATIONAL TRAINING STORAGE
STORE
ELEVATOR
PHARMACY
OFFICE
STORE ROOM
SMALL BUSINESS TRAINING
SERVICE ENTRY
CLEAN LINEN
LAUNDRY
MENS R.R.
WOMENS R.R.
VOCATIONAL TRAINING OFFICE
EXTENDED WORK CENTER
GARBAGE CANS
KITCHEN SUPPLY
PAINT SHOP
VOCATIONAL WORKSHOP
SERVICE ELEVATOR
GENERAL SHOP CABINET MAKING
MACHINE SHOP
VOCATIONAL EVAL
VOCATIONAL EVALUATION
CLASS ROOM

6 BED WARD
TOILET
TOILET
6 BED RM
6 BED RM
WOMEN BATH
6 BED RM
CORRIDOR
PROFFSSIONAL LIBRARY
2 BED RM
ENEMA
HALL
MEN BATH
TOILET
NURSE
ENEMA
CORRIDOR
TOILETS
TOILETS
TOILETS
LOUNGE AREA
3 BED RM
1 BED RM
1 BED RM
1 BED RM
1 BED RM
1 BED RM
RECREATION AND HOBBY ROOM
DIRECTOR OF NURSING
MED. SEC.
MEDICAL DIRECTOR
4 BED DORMITORY
6 BED DORMITORY
M.R.L.
SOCIAL WORKER
SOCIAL WORKER
SOCIAL WORKER
SOCIAL WORKER SEC.
OFFICE
STORAGE
NARA SEC.
DVR
DVR
PSYCHOLOGIST
ADMISS.
DIRECTOR OF CLIENT SERVICES
NARA COUNSELLOR
BATH
BATH
DVR
WOMEN
VOLUNTEER HEADQUAR.
COPY EQUIP
ELV.
STAFF LOUNGE
STAFF LOUNGE
MEN
STORE ROOM
CANTEEN
SWITCH BOARD RECEPTION
LOBBY & WAITING
CAFETERIA
BOOKKEEPING
ELV.
ACCOUNTING
EXEC. SEC. RECEPTION
CONFER. BOARD ROOM
KITCHEN
EXECUTIVE DIRECTOR
ASSOC. DIR.

# THE COMPREHENSIVE REHABILITATION FACILITY

## In a Regional Setting

Many comprehensive rehabilitation facilities serve clients from several States or other geographical subdivisions, providing comprehensive rehabilitation services for many disability groups. Although such facilities may also be in urban areas, those that are described here are located in smaller towns and rural areas.



A. Men's Dormitory.
B. Dining Hall and Activities Building.
C. Vocational Training School.
D. Maintenance Building.
E. Women's Dormitory.
F. Medical Services Building.
G. Administration and Professional Building.
H. Vocational Training School Extension.

# THE COMPREHENSIVE REHABILITATION FACILITY

## In a Regional Setting

### THE WOODROW WILSON REHABILITATION CENTER

**Fishersville, Virginia**

***Architects:***
**Vosbeck, Vosbeck, Kendrick and Redinger**

Started in 1948 in a temporary army hospital, the Woodrow Wilson Rehabilitation Center represents one of the earliest comprehensive rehabilitation facilities to be developed in this country. With a capacity of over 500 clients, and a staff of almost 300, it serves over 1800 yearly, from within the State of Virginia and far beyond the State's borders. It offers a complete rehabilitation program, including physical rehabilitation, vocational evaluation, counseling and training in many occupational areas. There are special programs for spinal cord injuries and the deaf. However, since it is not easily accessible by public transportation, or near a large population center, it lacks the cultural, social and medical resources which a more urban location would afford.

A staged building program was begun in 1961 to replace the temporary structures with a modern building complex. Intensive architectural research studies have resulted in the development of the new buildings, the prototype for the "campus form" complex for rehabilitation. The Men's Dormitory, Activities Building and Vocational Training Unit are completed. The Women's Dormitory is presently under construction, while the Medical Services and Administration Building and the Research Unit are programmed and will be under construction soon.

The Activities Building, unique in this type of facility, is the center for a recreation program designed to encourage the growth and development of the whole person. Acting as an agent for therapy, this building demonstrates through its function the successful result of the research upon which it was based. The auditorium is particularly noteworthy because it can be used by all clients regardless of disability.

When complete, this Center will represent a milestone of progress in the development of comprehensive rehabilitation facilities in this country.

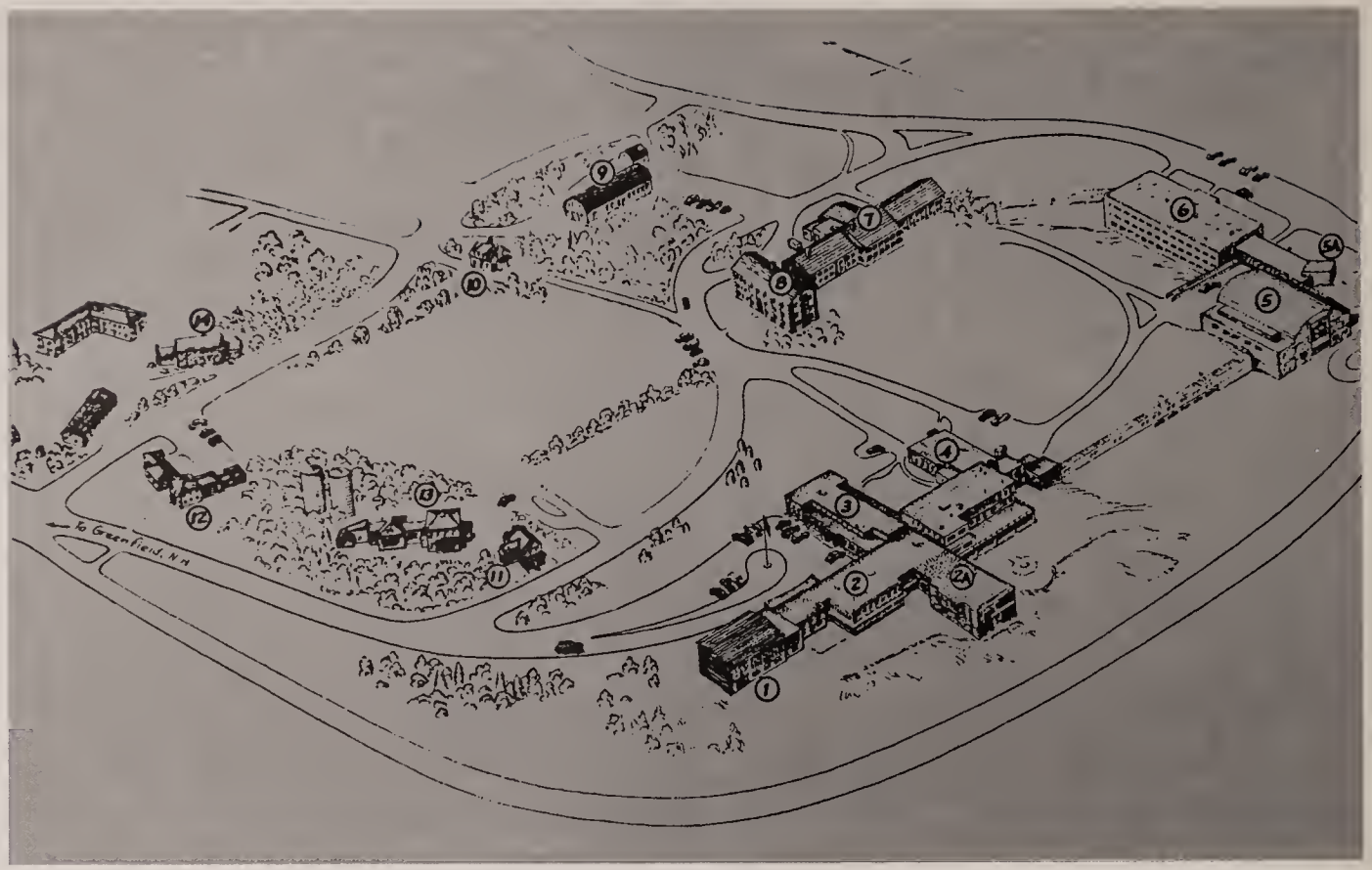
# THE COMPREHENSIVE REHABILITATION FACILITY

## In a Regional Setting

### CROTCHED MOUNTAIN REHABILITATION CENTER

**Greenfield, New Hampshire**

*Architects:*
**Crimp, Clinch, Brown and Fisher**
**Carter and Woodruff**




This Center opened in 1953 with the admission of 12 handicapped children. Now a facility for adults as well as children, its program is unique in that it deals not only with the well known disabilities but also with the less familiar such as Guillain-Barré syndrome, Friedreich's ataxia and Still's disease. The adult section includes the full range of services and an opthalmological clinic.

There is emphasis on research studies in this facility, and its training program is equally well known. The two excellent schools attached to the Center, one for special education of the multiply handicapped and the other for the deaf, attract students from throughout the New England States. The center is also affiliated with nearby colleges and schools of nursing.

The Crotched Mountain Rehabilitation Center is used by all the New England States as a comprehensive vocational rehabilitation center serving handicapped clients. However, like the Woodrow Wilson Rehabilitation Center, its rural location, and relative inaccessibility by public transportation, limit the Center largely to residential students.

Physically, the Crotched Mountain Rehabilitation Center is a cluster of modern buildings which are well planned and function efficiently for its varied program. A new medical wing is now under construction and plans are in progress to update the existing treatment center. The new inpatient area will admit both children and adults, the latter on the upper and the former on the lower level. A new staff dormitory (drawing shown here) is also under construction. Tentative plans also include the creation of more residential space for vocational rehabilitation clients and additional students.

The architectural significance of this facility lies in its relationship to the experimental approach in planning for an adult and children's facility for rehabilitation with heavy emphasis on research and training. Its future development will be well worth attention.

1. Carter Memorial Meeting House
2. Administration, Classrooms for School of Special Education

2a. Medical Wing

3. Catherwood Medical Facility
4. Food Service Area
5. Gymnasium, Vocational Services

5a. Meditation Chapel

6. Classrooms, School for the Deaf, Business Office, Given Medical Library
7. Hayden Student Dormitory
8. Bromley Staff Residence
9. Maintenance Building
10. Staff House
11. Staff House
12. Hemlock Staff Residence
13. Brien Lodge

CLARK CAMPUS

14. The Birches, The Cedars, The Pines

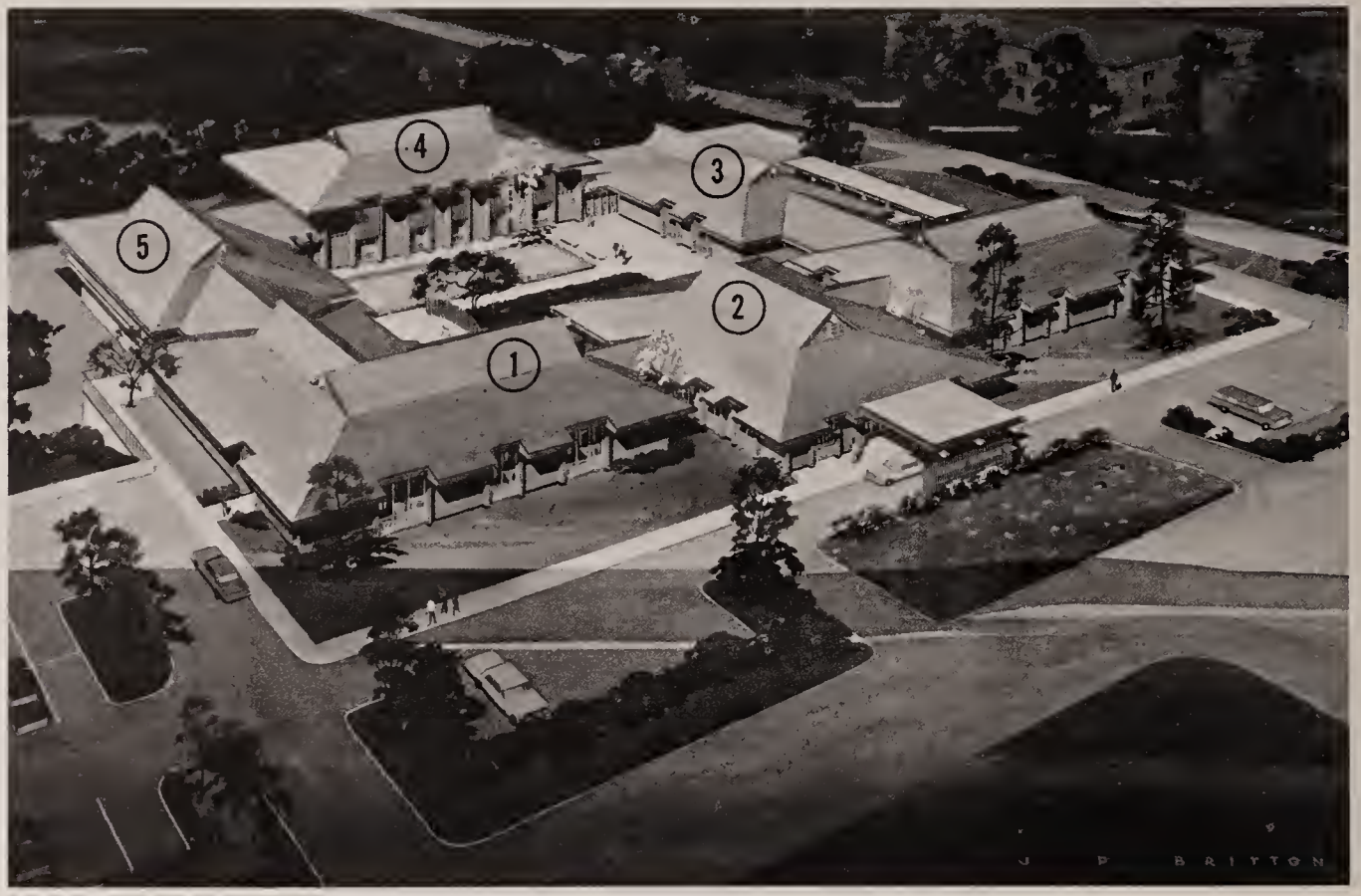
# THE COMPREHENSIVE REHABILITATION FACILITY

## In a Regional Setting

### ROCKY MOUNTAIN REHABILITATION CENTER

**Colorado Springs, Colorado**

*Architects:*
**Bunts and Kelsey**




1. Therapy wing, P.T., O.T., S.T.
2. Administration
3. Classrooms, 14
4. Gymnasium (in original plan). Later planning has moved this to #5 over the swimming pool. Additional classroom wing will occupy space 4.

This facility, operated by the El Paso County Society for Crippled Children and Adults, has completed three of five units in a planned building program. Future expansion will include a pool and gymnasium unit and another wing of additional classroom space with a large basement workshop area.

The program of the Rocky Mountain Rehabilitation Center is well adapted to the building complex. It maintains affiliation with more than nine agencies in the region, an indication of the influence and extent of its service program.

At present this Center operates as an outpatient facility and maintains a staff equivalent to 23 full time persons. It provides both short-term and long-term services in rehabilitation including physical, occupational and speech therapy, to over 300 patients per month, both children and adults, and classes for physically handicapped school age and preschool children, as well as training and education for the mentally retarded, aged 3-18.

The significance of this facility with its present total of 26,300 square feet of functional space, lies in an unusual pavillion plan form and the quality of its architectural expression, a reflection of indigenous building forms in this area. It is successful in creating a unique non-institutional character, a desirable goal in a modestly sized facility. When completed, this Center may well represent an excellent example of a modest, tightly organized and privately sponsored regional rehabilitation facility.

# THE REHABILITATION FACILITY WITH SPECIAL DISABILITY OR PROGRAM EMPHASIS

- FOR COMMUNICATIONS DISORDERS
- FOR THE BLIND
- FOR THE MENTALLY RETARDED AND EMOTIONALLY DISTURBED
- FOR REHABILITATION RESEARCH
- THE WORKSHOP

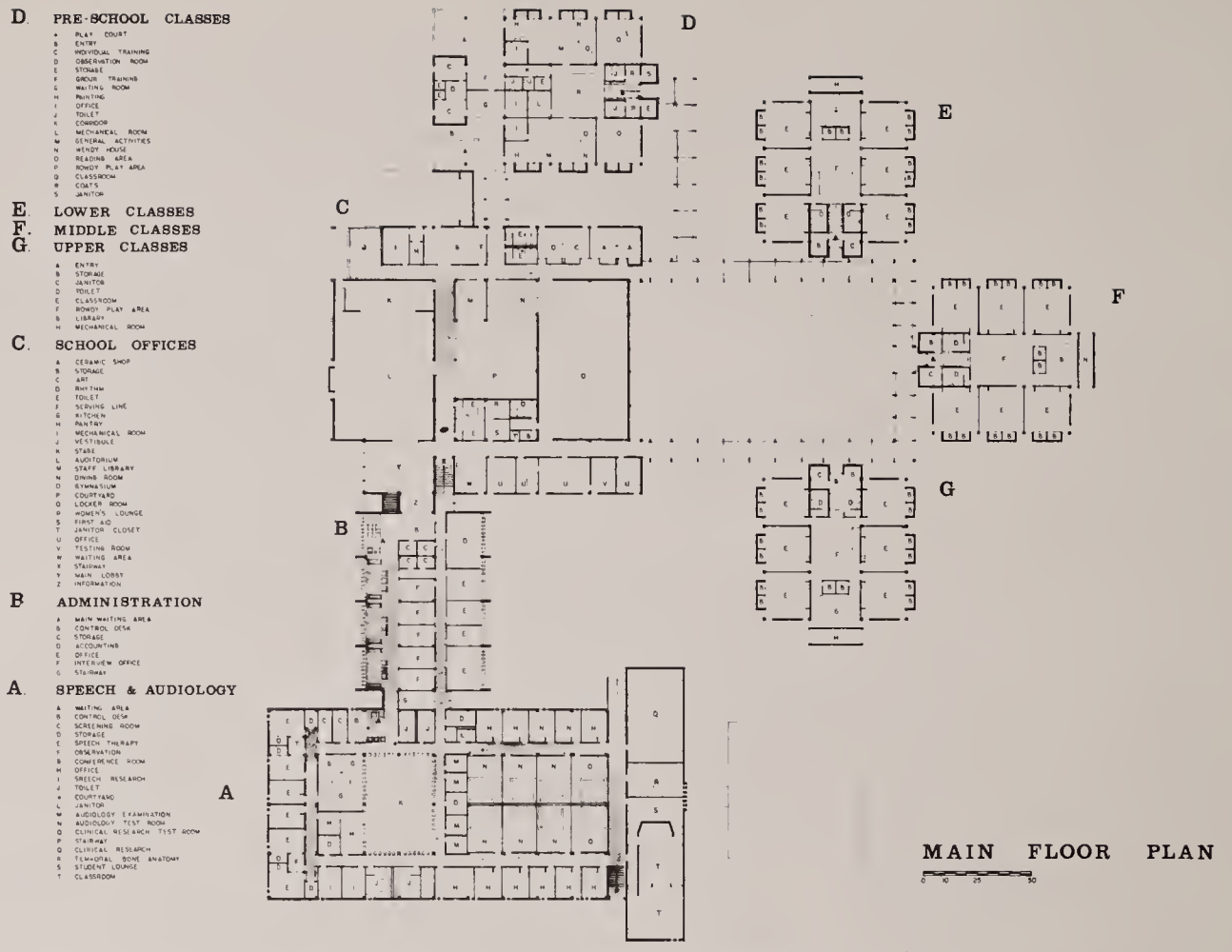
# THE REHABILITATION FACILITY WITH SPECIAL DISABILITY OR PROGRAM EMPHASIS

## For Communications Disorders

### CALLIER HEARING AND SPEECH CENTER

**Dallas, Texas**

***Architects:***
**Fisher and Spillman, Inc.**

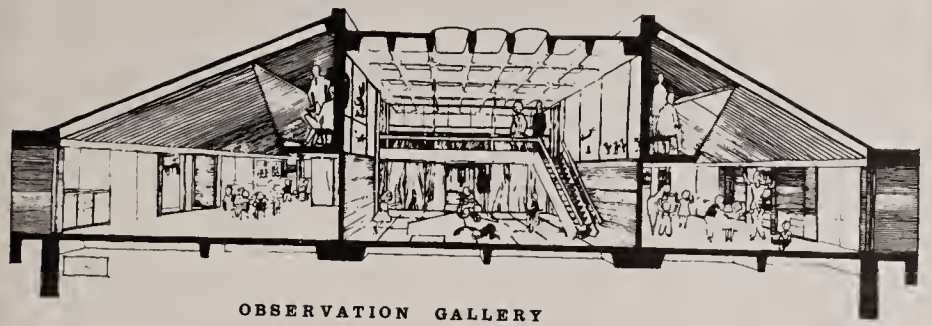



The Callier Center has been in operation since July, 1968 at its present location, a five acre tract adjacent to the University of Texas Southwestern Medical School in Dallas' major medical complex. Primarily an outpatient facility, it is accessible from a major throughway leading from the central city. This Center brings together "under one roof" three separate divisions.

The Pilot School for the Deaf with an enrollment of 150 children, from one to 15 years old, and a teaching staff of 23, utilizes four classroom buildings and an administrative section which includes gymnasium, art and rhythm rooms and cafeteria. The Audiology and Speech Therapy Division provides over 10,000 patient visits yearly in audiological evaluation, rehabilitation and speech pathology services. The Research Division, when completed, will carry on intensive studies in psychoacoustics, speech science, neurophysiology, microhistology and sound field testing. All three divisions are served by centralized social services, communications media, and psychological testing departments. The Callier Center also provides clinical practicums for medical and graduate students as well as practice teaching experience for students in programs of education of the deaf.

This facility is significant for the quality and character of its architectural scheme. Innovative building design provides overhead galleries from which classroom procedure can be observed without interruption of work. Architecturally the result of careful research, the room arrangements and details demonstrate sound application of such research. Much thought was given to the movement of clients between functional units and to and from the therapy and service buildings.

This Center represents a pioneering effort to search for progressive and experimental solutions for the architectural problem of a low-rise complex of buildings.



OBSERVATION GALLERY

# THE REHABILITATION FACILITY WITH SPECIAL DISABILITY OR PROGRAM EMPHASIS

## For Communications Disorders

### HOUSTON SPEECH AND HEARING CENTER

**Houston, Texas**

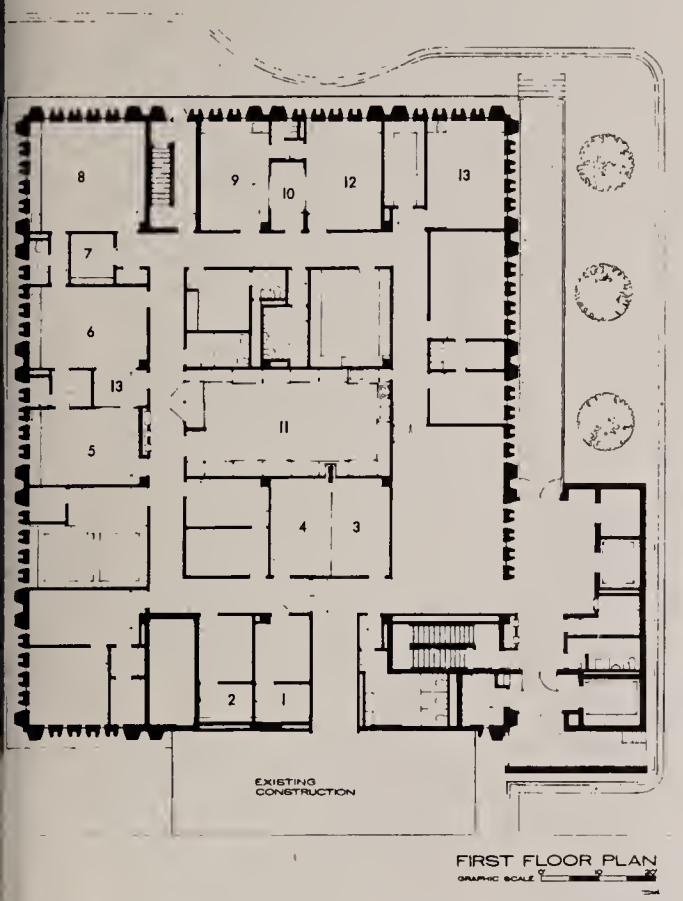
*Architects:*
**Wilson, Morris, Crain and Anderson**

From a modest start in 1951 the Houston Speech and Hearing Center has made remarkable progress. Now located in the Texas Medical Center in Hermann Park, its present service building contains 20,000 feet and a recent addition devoted to demonstration and research adds 39,000 square feet. The current client load for work in diagnostics, habilitation and rehabilitation is more than 2,500 annually.

The new building, completed in November of 1969, was constructed around a philosophy which proposes that habilitation, rehabilitation, and evaluative techniques should evolve from research. The intent of the Center is to attract investigators from varied disciplines such as neural chemistry, psycholinguistics, psychoacoustics, genetics, speech science, and child growth and development, to utilize laboratories within the Institute.

The structure is a windowless cube of concrete containing three floors and a basement. The below ground level contains supporting wood working, plastic, metal working, and electronic shops along with a complete photography laboratory and cineradiographic equipment. The first floor includes a number of rehabilitation and treatment laboratories as well as psychometric and audiometric testing facilities. On the second floor is an animal holding and research facility, eleven laboratories and a data processing room, along with several staff offices. The third floor contains offices, library, auditorium conference room, staff lounge and two rooms for video production. One of the TV rooms contains instrumentation, while the other has lights and cameras for television production.

In many ways this is an unique Center, in philosophy, program and facilities. The new research tower is one of the distinguished facilities in this field in the United States.




FIRST FLOOR PLAN

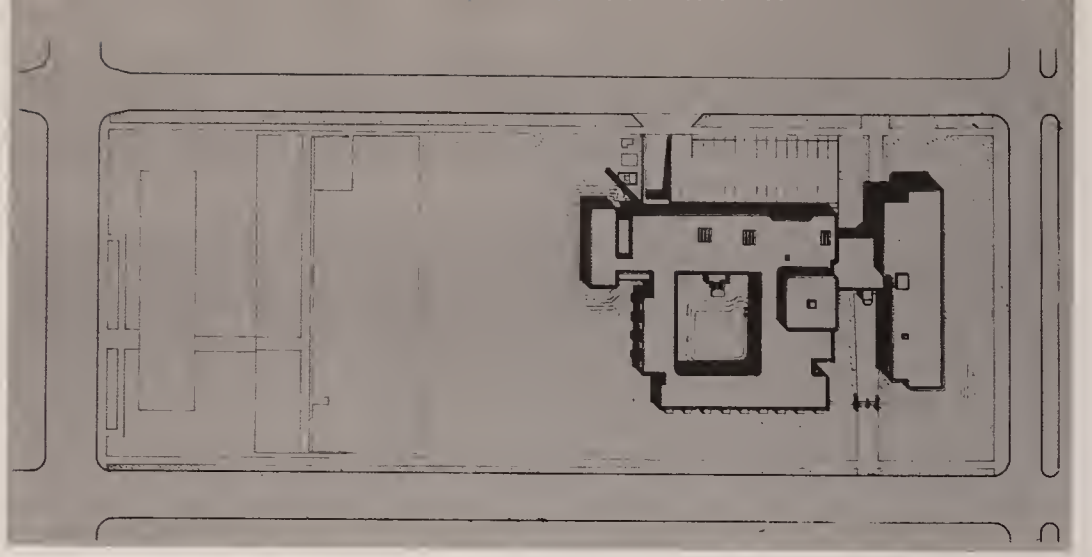
1. Test
2. Test
3. Parent Counseling
4. Parent Counseling
5. Voice Rehabilitation
6. Voice Rehabilitation
7. Observation Room
8. Auditory Rehabilitation
9. Articulation Training
10. Observation Room
11. Activity Room
12. Auditory Rehabilitation
13. Laryngectomy

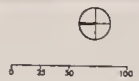
SECOND FLOOR PLAN

1. Animal Holding
2. Animal Disposal
3. Animal House
4. Food Storage
5. Drying
6. Scrub Room
7. Surgery
8. Neuro-Physiology
9. Experimental Psychology
10. Pathology
11. Bio-Acoustics
12. Radio-Isotope
13. Data Analysis
14. Genetics
15. Speech Acoustics
16. Bio-Chemistry
17. Speech Physiology
18. Computer
19. Psycho-Acoustics
20. Audiology Rooms

THIRD FLOOR PLAN

1. Conference
2. Administration
3. T. V. Studio
4. Library
5. T. V. Control
6. Lecture

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50
100

# THE REHABILITATION FACILITY WITH SPECIAL DISABILITY OR PROGRAM EMPHASIS

## For the Blind

ILLINOIS VISUALLY HANDICAPPED INSTITUTE

**Chicago, Illinois**

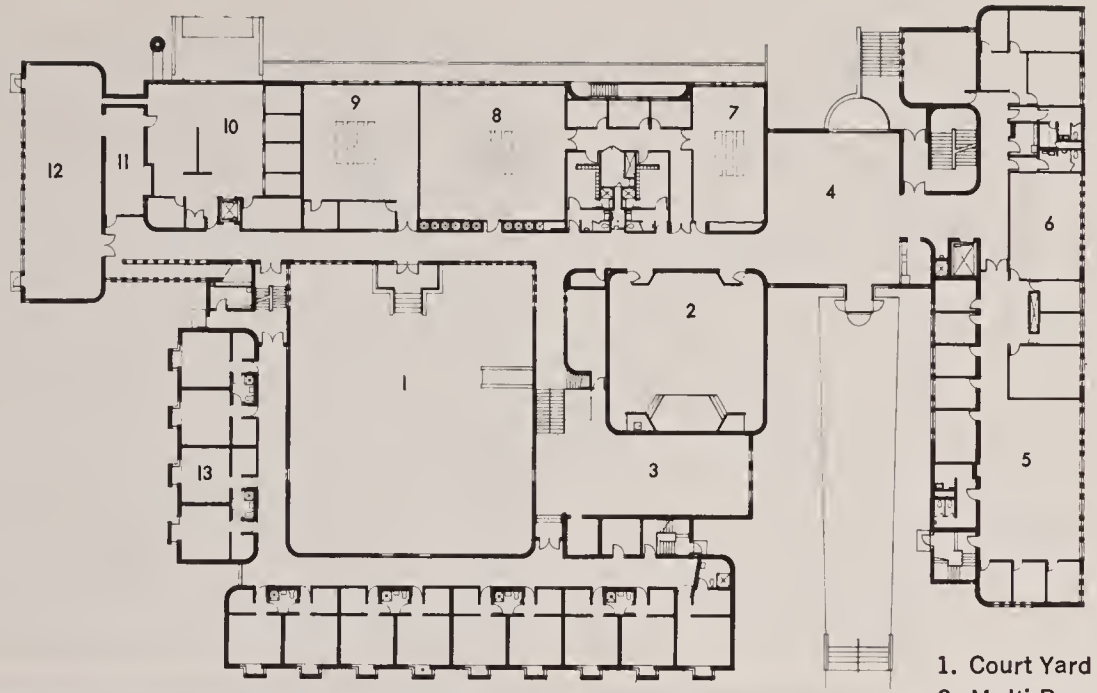
***Architects:***
**Harry Weese and Associates**

The Illinois Visually Handicapped Institute is located in the Medical Center complex on the near west side of Chicago. The structure has been planned to blend with surrounding hospitals, medical schools and similar facilities. This Institute represents one of the most carefully designed and distinguished solutions architecturally for a building devoted to the evaluation and training of the newly blind, aged 18 to 65.

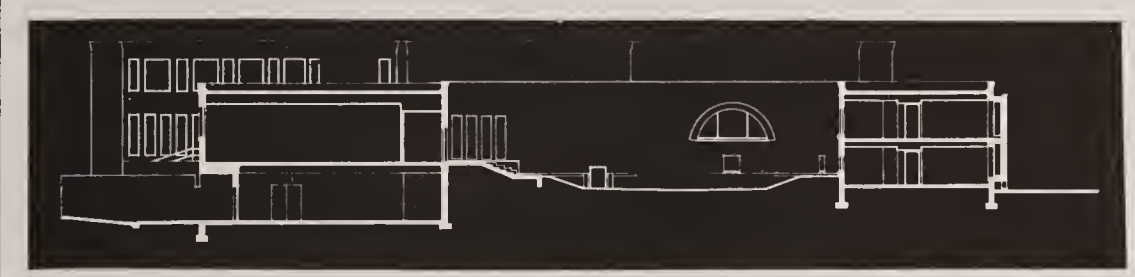
The design, which is intended to promote the program philosophy of this facility, maximum mobility and independence, demonstrates the result of careful analysis and sound research. Care has been given to the detailing of surfaces, openings, stairs and ramps, so that they will be particularly functional for the blind person. The dormitory wings, on two floors, reached by a flight down or up from the main level, enclose a recreational courtyard also used for beginning obstacle instruction. Each area exhibits an imaginative approach to its function, from the individual sleeping rooms to the ones devoted to trampoline exercises or to group gymnastics.

Two resident classes per year of 52 people each can be accommodated. The program of the Institute includes vocational guidance and training, social recreational activities, and research.

The Institute has been in operation since 1966 and as a prototype for such a facility deserves careful study. Future expansion will be necessary and further research into this building type can be expected.




1. Court Yard
2. Multi Purpose Room
3. Active Lounge
4. Lobby
5. Office Pool
6. Braille—Mimeo+Storage
7. Mobility Training
8. Physical Reconditioning
9. Occupational Therapy
10. Kitchen
11. Serving Area
12. Dining Room
13. Bedroom+Study



# THE REHABILITATION FACILITY WITH SPECIAL DISABILITY OR PROGRAM EMPHASIS

## For the Mentally Retarded and Emotionally Disturbed

### HARRIS COUNTY CENTER FOR THE RETARDED

**Houston, Texas**

***Architects:***
**Barnstone and Aubry**
**Wilson, Morris, Crain and Anderson**

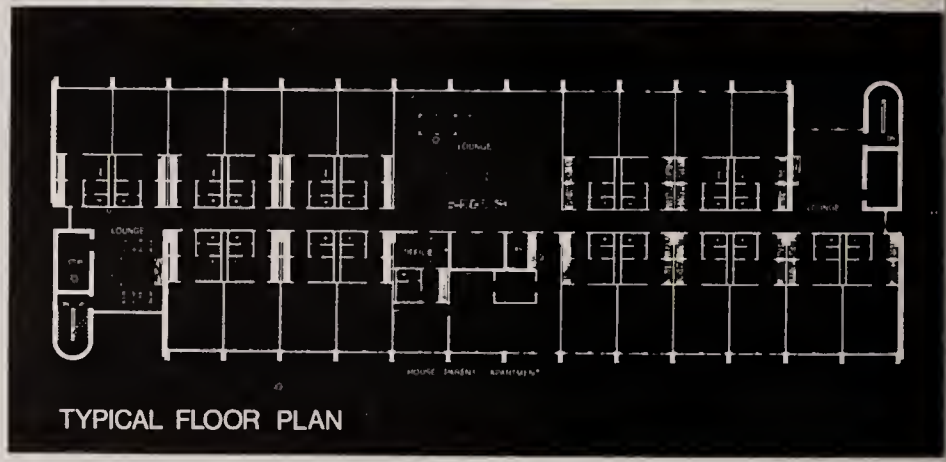
This Center, for the rehabilitation of the retarded, was built in 1966. With the addition of residential quarters it will contain all the elements for rehabilitation and training for the retarded, children as well as adults, including preschool through high school classes, therapy and recreation, testing and evaluation, counseling and guidance, medical and dental programs, a sheltered workshop and a research program. The Center also provides practice field work for students in many disciplines and cooperative programs in basic research and teaching methods.

The six building campus arrangement which houses the entire program, has a present capacity of 500 clients. Administrative and classroom buildings are grouped around an open court with the main therapy and recreation unit located between these and the workshop building.

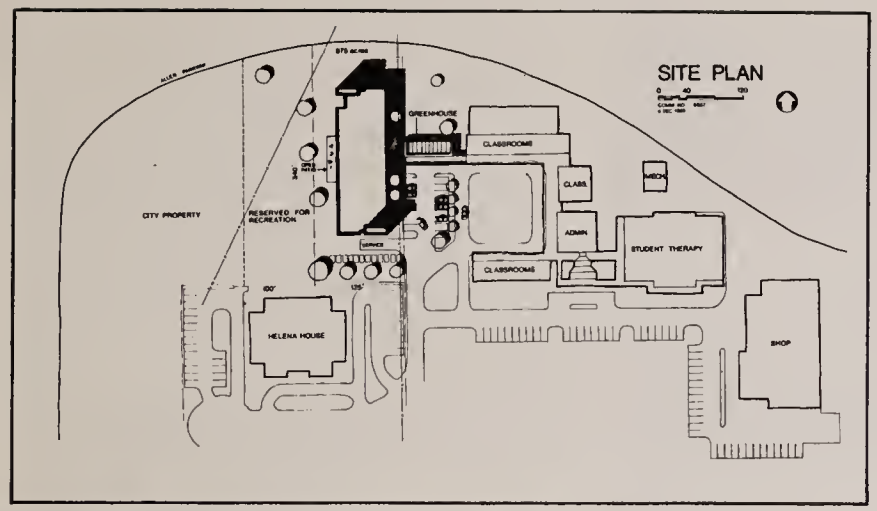
The entire building group is significant because its very stark architectural design and fairly inexpensive type of simple construction show the results of the research that went into its details and design. Each building has special characteristics which relate directly to its function. The complex avoids an institutional character yet provides the special environment most suitable for the retarded.

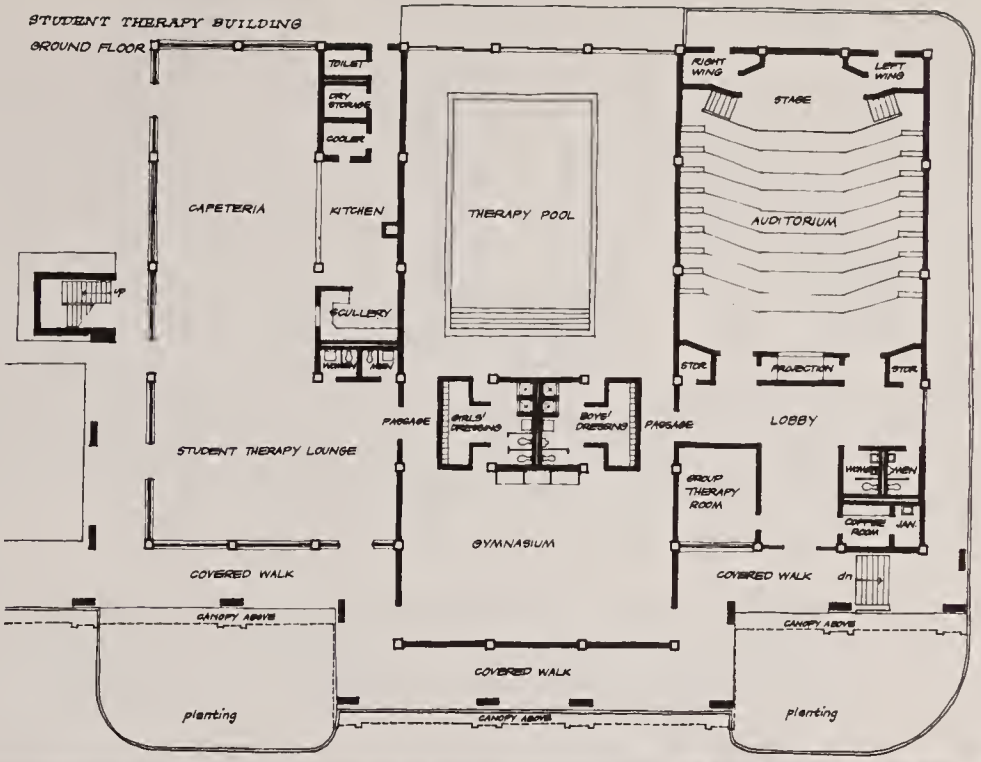
A six story residential unit, to be built in phases, is planned for this facility. Currently the initial two story phase is under way.

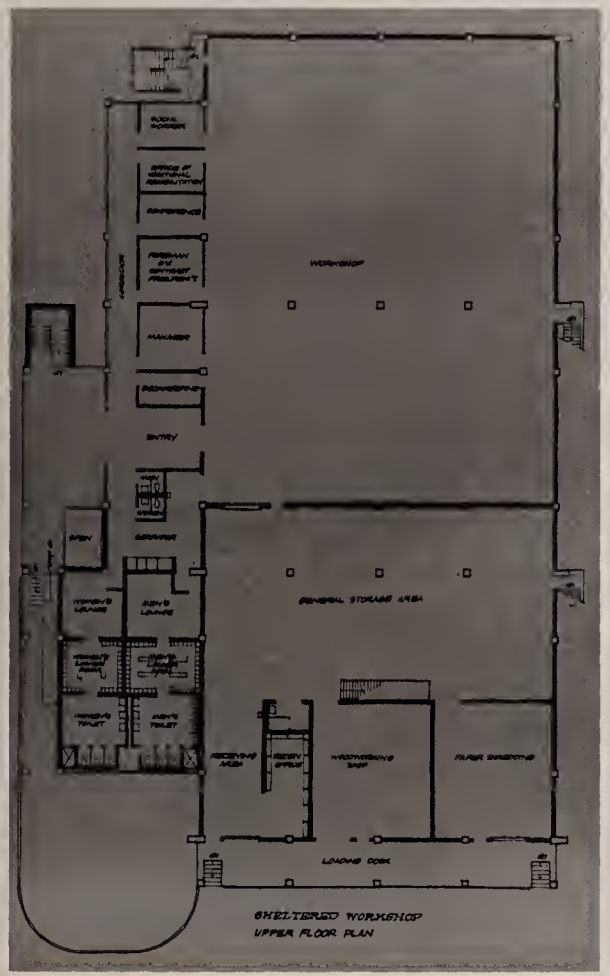
This dormitory type facility is intended to provide noninstitutional long-term housing for adult retardates, in a campus style environment that would allow program flexibility and freedom of movement. The location will give the residents opportunity to make full use of existing classrooms, auditorium, cafeteria, swimming pool and gymnasium for evening training, entertainment and recreation.



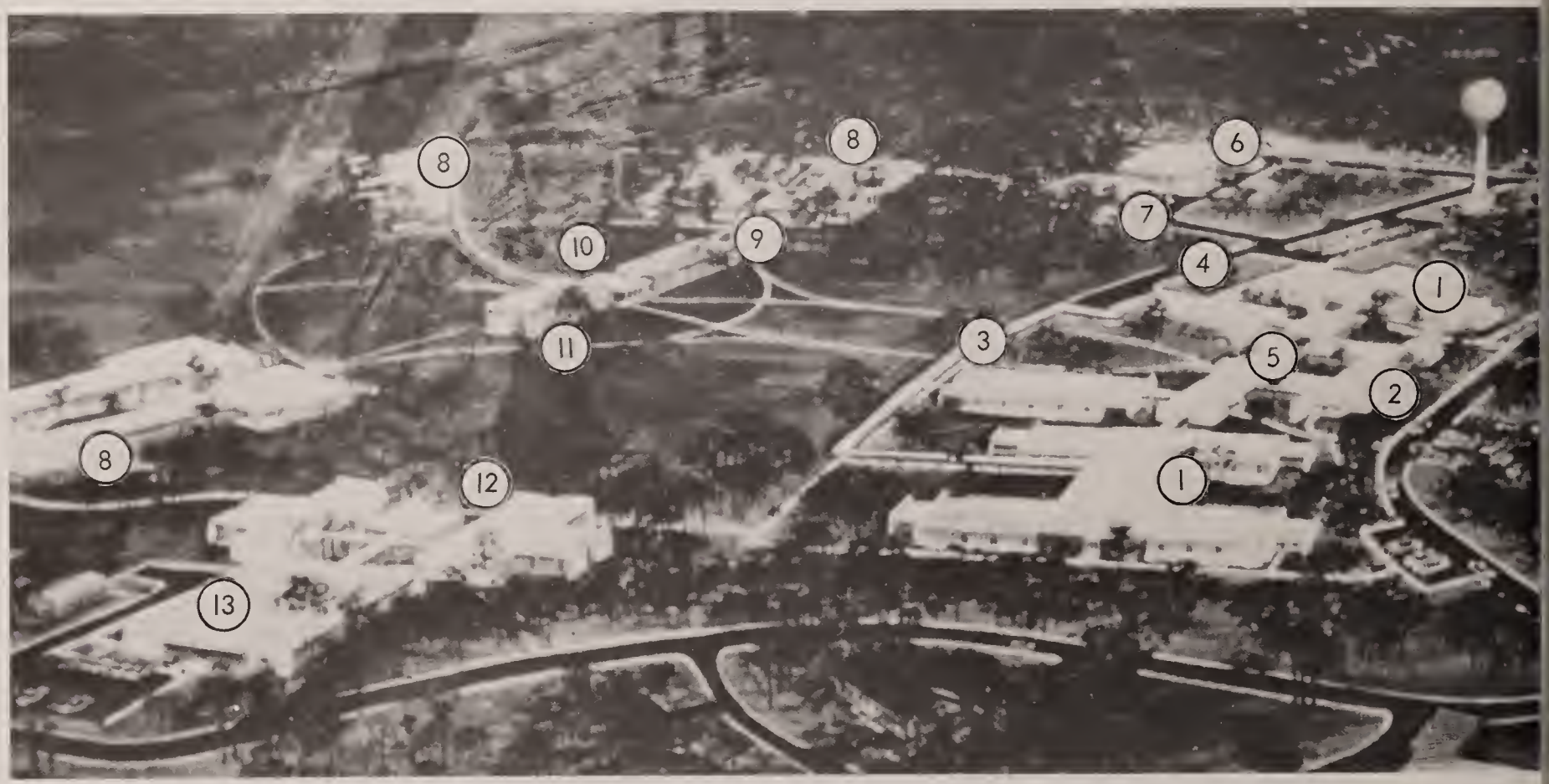
TYPICAL FLOOR PLAN


SITE PLAN
CITY PROPERTY
RESERVED FOR RECREATION
GREENHOUSE
CLASSROOMS
CLASS
ADMIN.
STUDENT THERAPY
CLASSROOMS
HELENA HOUSE
SHOP


STUDENT THERAPY BUILDING
GROUND FLOOR
TOILET
DRY STORAGE
COOLER
CAFETERIA
KITCHEN
THERAPY POOL
GALLERY
RIGHT WING
LEFT WING
STAGE
AUDITORIUM
STOR.
PROJECTION
STOR.
PASSAGE
GIRLS' DRESSING
BOYS' DRESSING
PASSAGE
LOBBY
STUDENT THERAPY LOUNGE
GROUP THERAPY ROOM
WOMEN
MEN
OCCUPIED ROOM
JAN.
GYMNASIUM
COVERED WALK
COVERED WALK
dn
CANOPY ABOVE
CANOPY ABOVE
COVERED WALK
planting
CANOPY ABOVE
planting


WORKSHOP
MANAGER
ENTRY
MATERIAL STORAGE AREA
LOADING DOCK
SHELTERED WORKSHOP
UPPER FLOOR PLAN

1. Total Care Units
2. Administration Section
3. Infirmary
4. Kitchen and Dining Area
5. Medical Area, including Offices, Examining Rooms, Laboratories, Dental Units, X-ray and EEG
6. Warehouse and Laundry Area
7. Power House
8. Double Cottage Areas
9. Classrooms and Office for Education Department
10. Canteen
11. Auditorium
12. Dormitories for Rehabilitation Center
13. Vocational Training Classrooms



THE REHABILITATION FACILITY WITH SPECIAL DISABILITY OR PROGRAM EMPHASIS

# For the Mentally Retarded and Emotionally Disturbed

## HAMMOND STATE SCHOOL

**Hammond, Louisiana**

***Architects:***
**Wilson and Coleman, A.I.A.**

Located on a 100 acre wooded tract of land six miles from Hammond, Louisiana, this Center for the mentally retarded was completed in 1966. It is a well organized building group of three major divisions, the total care and administrative group, the vocational rehabilitation group, and the cottages.

This is a residential facility offering diagnostic, evaluation, and training services, with a present patient load of 800, and a staff complement of 650. The total care division handles 320 clients, in a hospital like setting. The residential vocational rehabilitation unit accommodates 64 clients in its comprehensive 2-year program which includes vocational training, social and work adjustment, and recreational activities. The cottage units which provide long-term educational and residential services, include dormitories, an educational center, multipurpose auditorium and supporting facilities.

The architectural significance of this Center is demonstrated by the unique quality of privacy and identity achieved in the grouping of the buildings. The entire layout of the building group is very skillfully handled, with a real sense of intimacy, avoiding an institutional character.

The courts formed by low enclosing walls encourage privacy and at the same time create a sense of identity for the various groups. The vocational training division is a model of good planning. Throughout the total care division there are none of the traditional objectionable features of odor, noise, or confusion. An excellent environment has been created, due in great measure to the quality of the architectural design.

The national reputation of this facility is well deserved.

THE REHABILITATION FACILITY WITH SPECIAL DISABILITY OR PROGRAM EMPHASIS

# For the Mentally Retarded and Emotionally Disturbed

## CENTER FOR DEVELOPMENTAL AND LEARNING DISORDERS UNIVERSITY OF ALABAMA IN BIRMINGHAM

**Birmingham, Alabama**

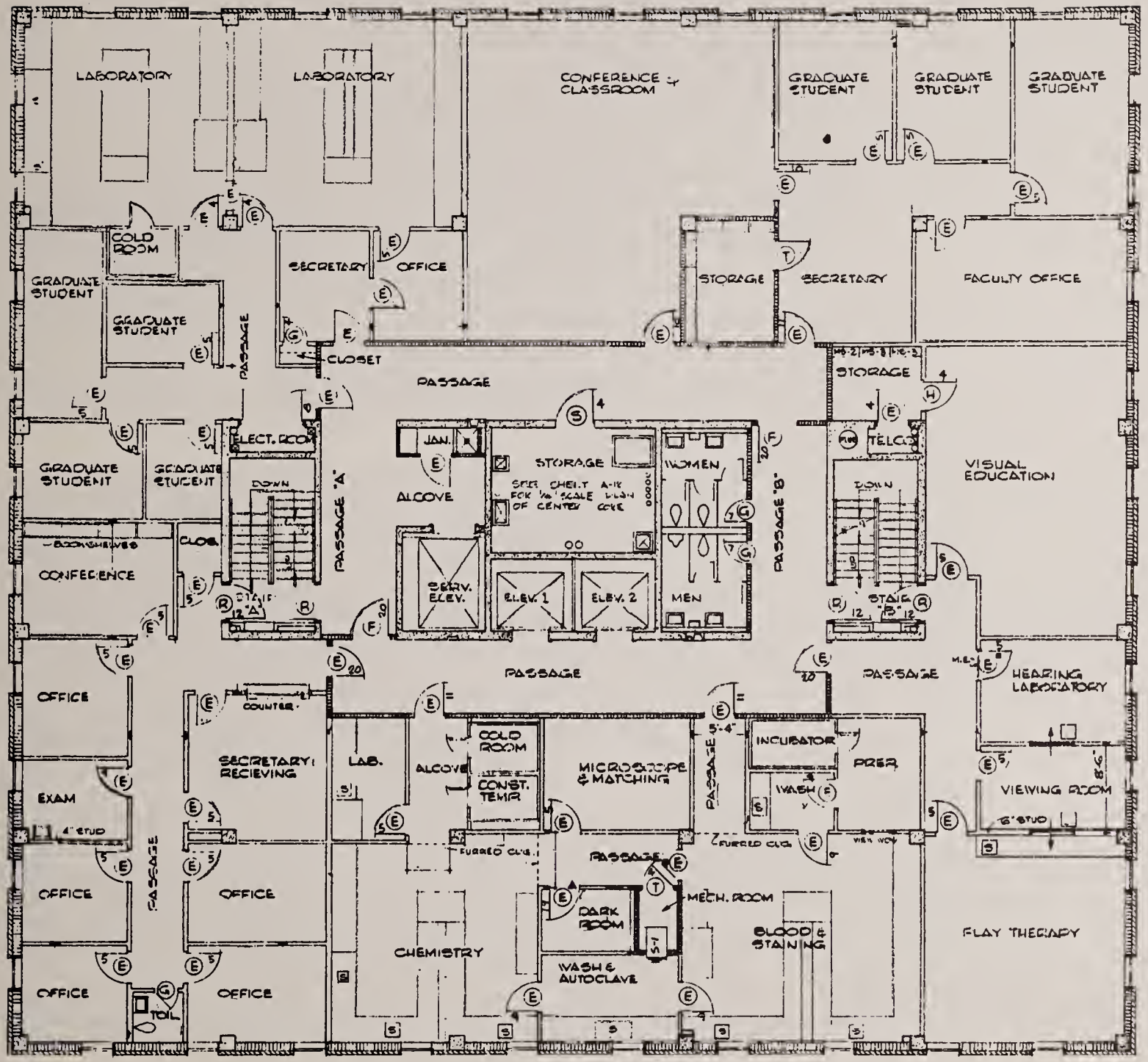
*Architects:*
**Charles H. McCauley and Associates**

This Center, which is nine stories high, is somewhat similar architecturally to the new Research Institute at the Houston Speech and Hearing Center. It is integrated within the rest of the Medical Center and within the area generally dedicated to rehabilitation.

The ground floor includes offices, diagnostic rooms and the library. The second floor houses classrooms for special education for preschool and elementary grades, and offices. On the third and fourth floors there are laboratories, offices, examining rooms and conference areas. The fifth floor is devoted to testing and control areas. The sixth floor has pressure chambers and a large play area—dining room. The remaining three floors will be used for research. The central core of the building contains the elevator bank, toilets and storage areas.

Although the primary role of this facility is to serve as a training center for professionals and subprofessionals in the disciplines associated with mental retardation, it also provides a full range of services for the mentally retarded. The Division of Child Development assists in the early identification and treatment of children with physical and learning disabilities, while the Divisions of Special Education and Vocational Rehabilitation offer a continuum of services from primary to job placement level. Concurrent medical, psychological and social services are provided. There are also within the facility several research areas directed toward the study of mental retardation and birth defects.

Undoubtedly the result of space restrictions within the medical center area, the use of a high-rise structure as a facility for the retarded and those suffering from related disabilities is unusual and therefore architecturally significant. This facility, like the one in Houston, is experimenting with this building type and should be reviewed again.


LABORATORY
LABORATORY
CONFERENCE & CLASSROOM
GRADUATE STUDENT
GRADUATE STUDENT
GRADUATE STUDENT
COLD ROOM
GRADUATE STUDENT
GRADUATE STUDENT
SECRETARY
OFFICE
STORAGE
SECRETARY
FACULTY OFFICE
PASSAGE
CLOSET
PASSAGE
STORAGE
ELECT. ROOM
JAN.
STORAGE
WOMEN
TELCO
GRADUATE STUDENT
GRADUATE STUDENT
DOWN
ALCOVE
VISUAL EDUCATION
PASSAGE "A"
PASSAGE "B"
BOOKSHELVES
CLOS.
CONFERENCE
SERV. ELEV.
ELEV. 1
ELEV. 2
MEN
DOWN
STAIR "A"
STAIR "B"
PASSAGE
PASSAGE
HEARING LABORATORY
OFFICE
COUNTER
SECRETARY RECIEVING
LAB.
ALCOVE
COLD ROOM
CONST. TEMP.
MICROSCOPE & MATCHING
PASSAGE 5'-4"
INCUBATOR
PREP.
WASH
VIEWING ROOM
EXAM
4" STUD
FURRED CLG.
FURRED CLG.
PASSAGE
PASSAGE
OFFICE
OFFICE
DARK ROOM
MECH. ROOM
CHEMISTRY
BLOOD & STAINING
PLAY THERAPY
OFFICE
OFFICE
WASH & AUTOCLAVE
TOIL.

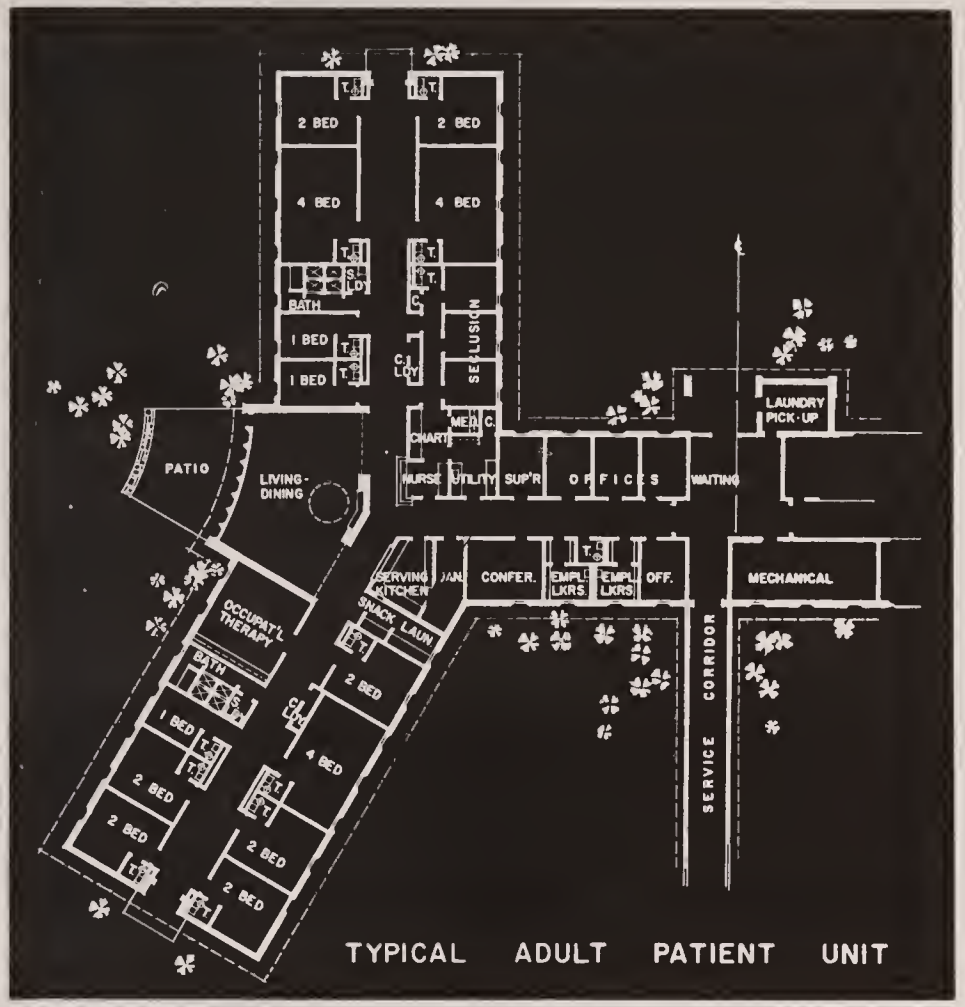
# THE REHABILITATION FACILITY WITH SPECIAL DISABILITY OR PROGRAM EMPHASIS

## For the Mentally Retarded and Emotionally Disturbed

H. DOUGLAS SINGER
ZONE CENTER

**Rockford, Illinois**

*Architects:*
**Hubbard and Hyland**
**Bradley and Bradley**




Taking advantage of a sloping terrain, this facility has been designed as a two level campus, on the north edge of Rockford. This community mental health center provides direct clinical services to a ten county area Zone, both short-term and residential psychiatric service, an alcoholism treatment program, inpatient care for emotionally disturbed children, and diagnostic service to the mentally retarded. It also provides case and program consultation as well as training seminars to mental health and health-linked personnel within the Zone.

The H. Douglas Singer Zone Center consists of eight buildings and a garage which now houses the rehabilitation workshop. The general scheme is a Y plan with irregularly shaped two story buildings housing administrative, occupational and recreational therapy and central service elements, with one story dwelling units at the ends of the Y, adult patient care units on the upper level, and child patient care units on the lower level to the east. The three central buildings are interconnected to form an inner court with an enclosed garden area, and all buildings are connected with glass enclosed passageways for patient, staff and pedestrian traffic plus a service route for food carts, linen and supplies. Each residential building contains two 28 bed patient care units for adults and adolescents, for a total of about 220.

This facility is one of seven new community health centers designed for the State of Illinois, based on a broad comprehensive research effort and developed as a cooperative architectural program with seven architectural firms. Given free rein in formulating their own building concepts, the architects have developed complexes, each different, each respecting the site and locale of the facility, but with a basic harmony reflecting the program requirements. This development could set a pattern for other sections of the country.

# THE REHABILITATION FACILITY WITH SPECIAL DISABILITY OR PROGRAM EMPHASIS

## For Rehabilitation Research

TEXAS INSTITUTE FOR REHABILITATION AND RESEARCH
(Baylor University Medical Rehabilitation Research and Training Center)

**Houston, Texas**

*Architects:*
**Wilson, Morris, Crain and Anderson**

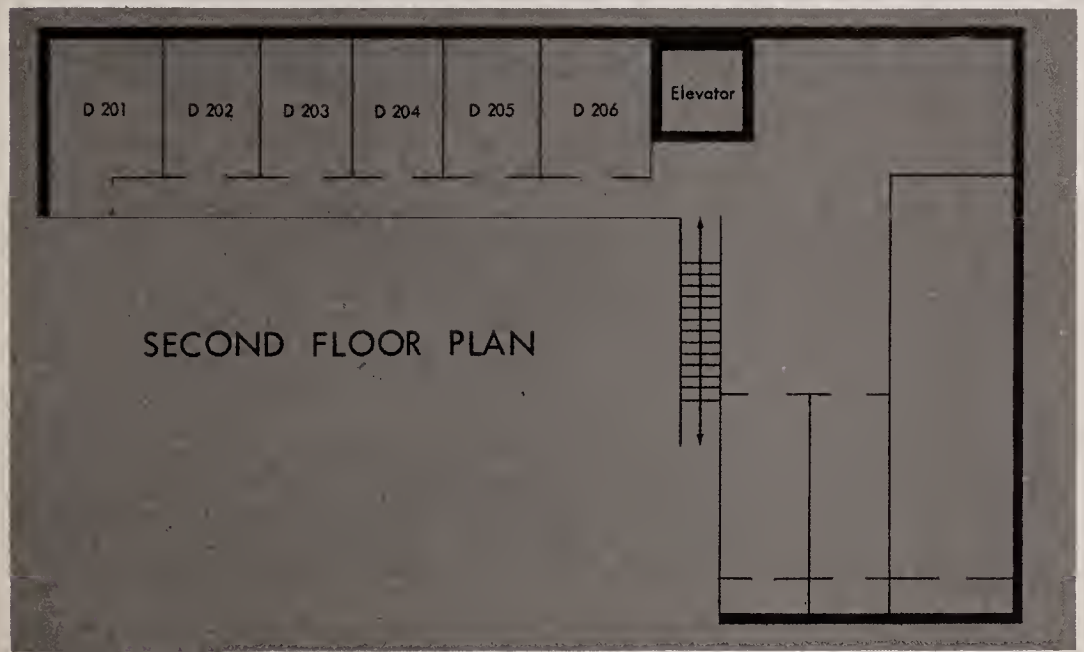
This Institute, located in the large medical complex in Hermann Park, Houston, surrounded by a variety of medical and hospital facilities, has the advantage of broad consultant staff support as well as clinical subjects available for special research endeavors. With a 54 bed inpatient capacity, it also serves outpatients, providing a full range of physical rehabilitative services to those whose disabilities fall within its area of research emphasis. Special projects include the Center for Care of Patients with Spinal Cord Injury; Cystic Fibrosis Care, Teaching and Research Center; and the Pediatric Respiratory Disease Center. Through its affiliation with the Baylor College of Medicine, the Institute provides training for medical students and others in the rehabilitation disciplines as well as in-service courses.

Although the Institute is a small building within a large complex, it preserves its own identity with a protected site location. Basically a one story design, built around a series of well landscaped open courtyards, there is partial space on the second floor and additional area in the basement. The plan is well adapted to the research function of the program but is rapidly being stretched to capacity.

As a temporary measure, a semipermanent structure is being planned which will house some of the administrative offices, making additional space available for program activities. This structure will serve until a more permanent building, also in the planning stage, is erected.

The latter plan, which has been researched by architects, is based on a time and motion study of the most efficient way to conduct various types of therapy treatment and could produce a new type of design, departing radically from presently accepted ideas. The results of this architectural research program may prove significant for future planning in rehabilitation.

MAIN FLOOR PLAN
Physical Medicine
Soc. Ser.
Ergonomics Laboratory
Laungas
Ph.M.
Ph.M.
Ph.M.
TRC
Data Processing
Vocational Unit
Classroon
Nursing Offices
Data Proc.
Scali-asis
Surgeons Office
Photography
Physical Therapy
Education Office
Library
Occupational Therapy
Hydrotherapy
Surgery
Intensive Care
Respiratory Therapy
Ward
Ward
Spinal Cord Center
Drivers Ed.
Stairs
Lounges
Elev.
Stairs
Sta. 1
Sta. 2
Sta. 3
A-Wing
Admin-istration
Director's Office
Dir. of Patient Care
Orthotics
C.F.
Cystoscopy
Dent. Cl.
C.F. Treatment
C.F. Clinic
Vital Studies
X-Ray
Coat Room
Pharmacy
Cafeteria
Kitchen
Load Dock
M. Sta.
Nursing
Psychology
Neurology
Soc. Ser.
Scheduling
Snack Bar
Patio
Social Service
Dir. Stroke Prog.
Business Office
Business Office
Cashier
Lounges
Stair
Cystic Fibrosis
Information
Dir. Vol.
Station 4
Private and Semi-private Rooms
Sch. Rm.
Publications
Social Service
Grants
Account ing
Credit
Admitt ing
Social Service
Lobby
Stare
B-Wing


SECOND FLOOR PLAN
D 201
D 202
D 203
D 204
D 205
D 206
Elevator

# THE REHABILITATION FACILITY WITH SPECIAL DISABILITY OR PROGRAM EMPHASIS

## The Workshop

GOODWILL INDUSTRIES
REHABILITATION CENTER

**Winston Salem, North Carolina**

***Architects:***
**Lashmit, Brown and Pollock, A.I.A.**

1. Student Dormitory (Capacity 80. Females on top floor, and males on two lower floors.)
2. Penthouse Apartment for housemother
3. Workshops
4. Storage, Receiving and Shipping
5. Recreation Area and Chapel
6. Medical Department and Professional Staff Offices
7. Goodwill Budget Store
8. Work Training
9. Administration and Department of Vocational Rehabilitation Offices

There are several major Goodwill Industries Rehabilitation Centers in the United States but the Center in Winston Salem is one of the first to attempt a dormitory unit, for 78 trainees, as part of the facility. This Center is housed in a new modern building complex with the capacity for over 300 trainees yearly, about 125 employees in its industrial workshop and a staff of 30 professional and supervisory personnel.

The entire complex is well planned as a smoothly functioning production and training center. In particular, the areas for the movement of material and supplies, storage, shipping, and production centers are well designed and function extremely well. The display and demonstration areas promote public understanding of the work of the organization.

The dormitory represents an experiment in providing housing for some of the trainees. It is a simple, four story unit intended to add to the dimensions of the training program.

The quality and visual form of this Center reflect a progressive concept for public understanding of the function of the Goodwill Industries. It looks like a contemporary industrial structure, clearly reflecting its character and function. It is as well planned as the newest technical plants being built throughout the country. This is one of the best facilities yet developed by Goodwill Industries.

AS IS
STORE

THE REHABILITATION FACILITY WITH SPECIAL DISABILITY OR PROGRAM EMPHASIS

# The Workshop

THE WORKSHOP, INC.

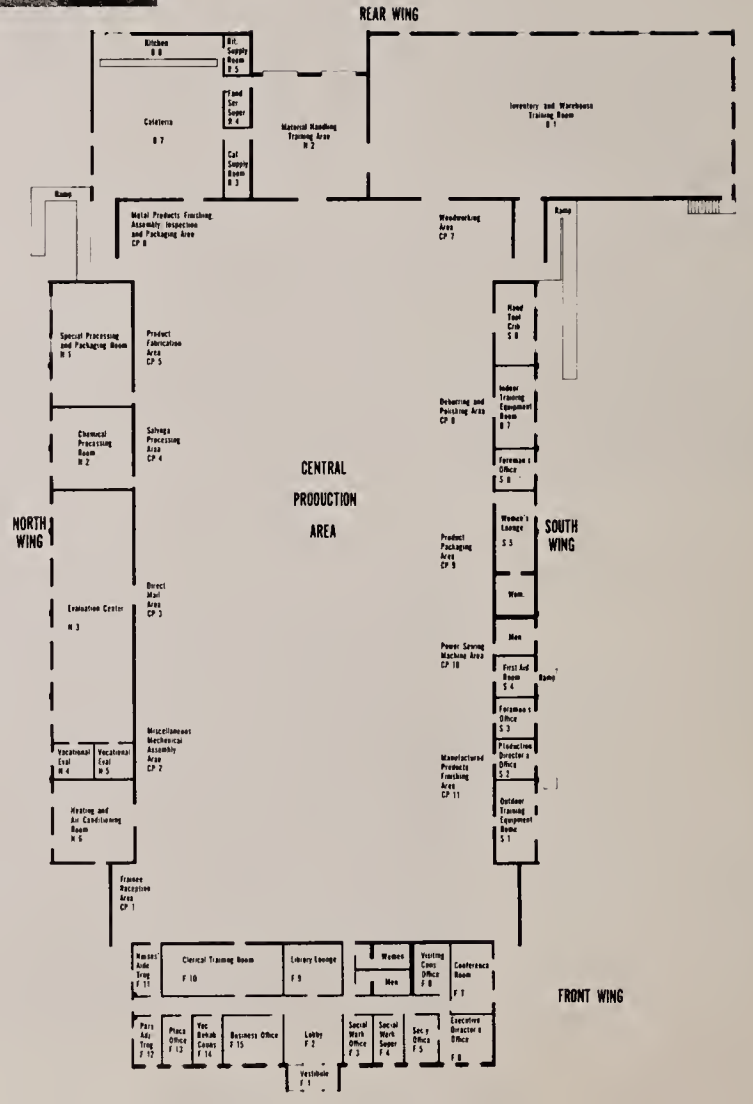
**Menands, New York**

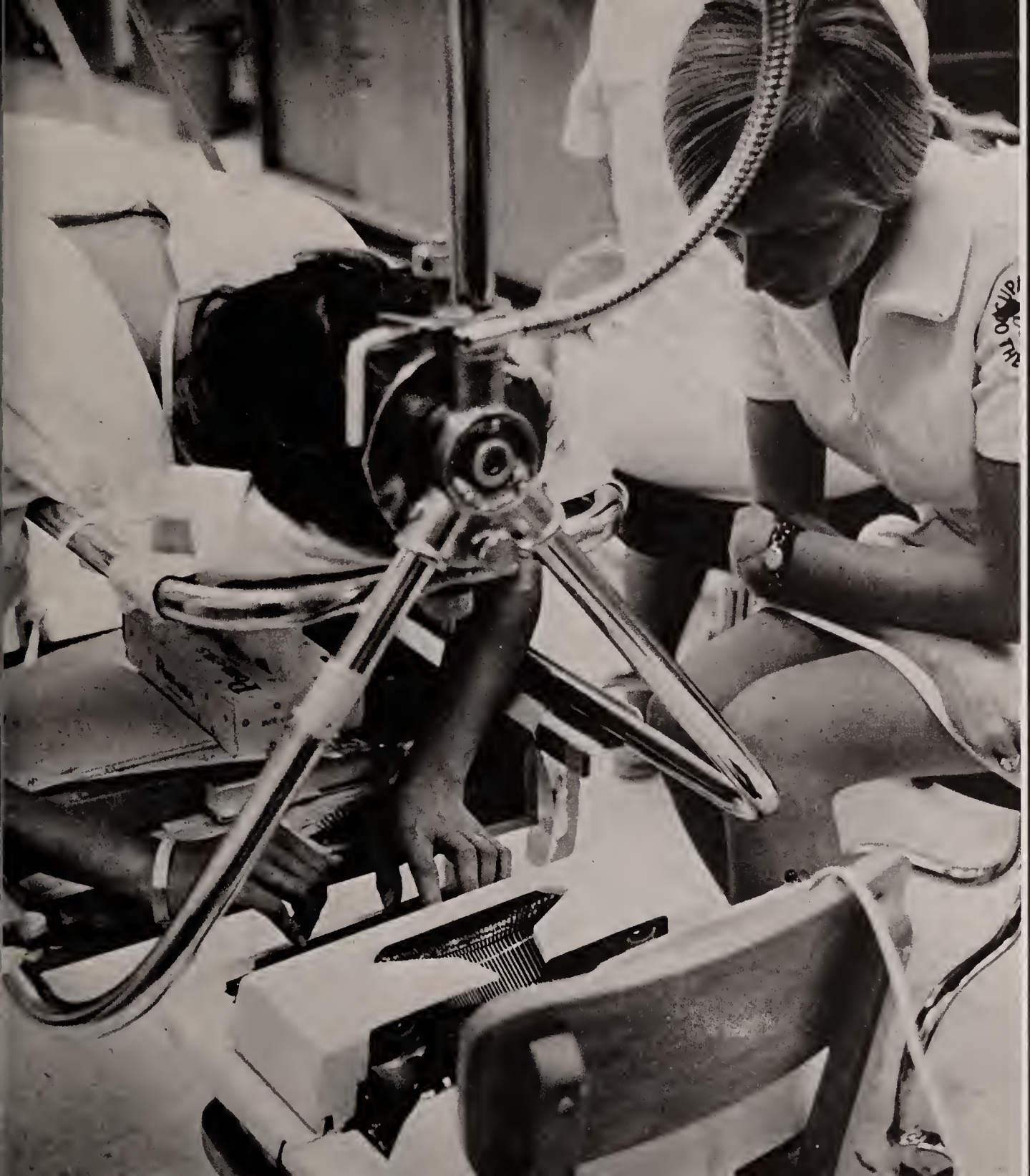
*Architects:*
**Cadman and Droste, A.I.A.**

Started in 1955, in a basement in downtown Albany, the needs of an expanding program resulted in frequent moves by this facility. In 1969 it moved into its own building in Menands, a suburb of Albany. Situated on a main bus route, it is easily accessible to the entire Capital District, which includes the three cities of Albany, Troy and Schenectady, by public as well as private transportation. Here a complete program of vocational evaluation, work adjustment, vocational training and placement, in many occupational areas, is offered to a daily population of 225, by a staff of 22 employees; administrative, professional, clerical and supervisory. The Workshop has a well developed subcontract program which is utilized by over 55 firms in the Albany area.

This building is a simple, one story concrete block structure. A large production area comprises the major part of the building. Although divided into designated areas, it was left unpartitioned in order to provide more flexibility in its use. The only defect in the building plan appears to be insufficient warehouse space. An addition is presently being planned which will add sufficient work and storage space to bring the client population up to 325 persons. Future expansion plans include the establishment of satellite facilities which will supplement the central facility services and bring them closer to the people they serve.

This is an excellent example of a relatively low cost, well designed industrial type workshop.





# THE REHABILITATION FACILITY DIRECTLY RELATED TO A HOSPITAL

## As a Separate and Autonomous Facility

During recent years concepts in hospital planning and management have been decidedly changed from those existing in the years immediately after World War II. This is the result of the increase in medical services demanded by the public, as well as from the stimulation of Federal health programs.

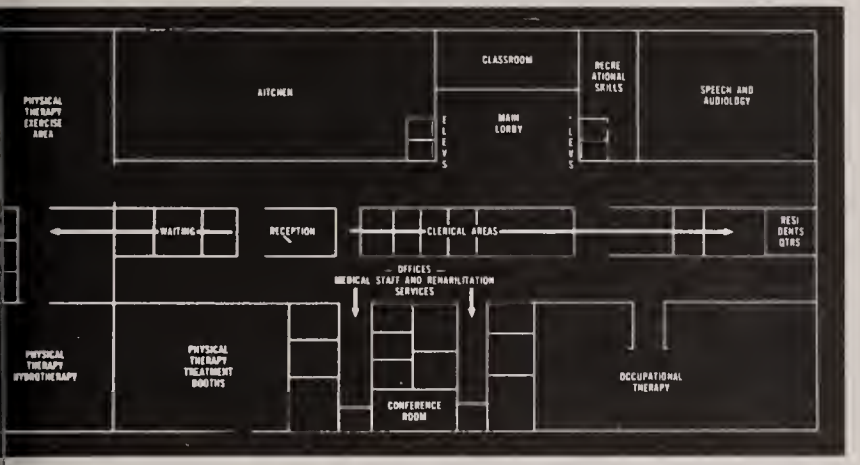
The acute care and teaching hospitals have also been seriously affected by the great increase in the management costs of hospitals. New procedures are being created to meet these costs. One of these has been the attempt to decentralize the several nursing elements and separate out those which need less in the way of constant services such as nursing,

food service, drugs, laundry, etc. This has produced buildings which are satellites to the main hospital.

The "extended care" center which cares for mobile, convalescent patients who need minimum nursing service, and who can move on their own to treatment services, food centers and recreation, is one such satellite. The autonomous rehabilitation services facility is an example of such a unit.

# THE REHABILITATION FACILITY DIRECTLY RELATED TO A HOSPITAL

## As a Separate and Autonomous Facility



### INSTITUTE OF REHABILITATION MEDICINE GOOD SAMARITAN HOSPITAL

**Phoenix, Arizona**

*Architects:*
**Weaver and Drover, A.I.A.**

This exceptionally well planned five story modern structure, completed in 1967, is important for the quality of its design and detailing as well as its identity as one of several satellite institutes to be grouped around a main hospital, such as a childrens' center and other institutes. The wide ground floor arcade formed by the columns as pilotes is an example of excellent functional design, well suited to the warm Arizona climate. The first two stories are devoted to research and therapy, while the upper three floors contain rooms for 40 inpatients.

There is a second floor bridge connection to the main hospital and a direct connection with a central parking facility, the latter so situated that it serves all areas within the hospital complex. There is minimal walking to any building in the complex, and careful traffic separation. The hospital is located on major arterial routes with excellent bus service as well as automobile access.

The Institute of Rehabilitation Medicine offers comprehensive rehabilitation for treatment of congenital defects and of disabilities resulting from diseases or injuries of the muscular, skeletal, or nervous systems. Program services include medical evaluation and treatment, occupational, physical, speech and hearing therapy, and psychological, social and vocational evaluation and counseling. Outpatient and home care services are available. The residency program in Physical Medicine and Rehabilitation is the first one in the country approved for a private hospital not affiliated with a medical school.

The Spinal Injury Service of the Institute is affiliated with Barrows Neurological Institute for a combined and coordinated approach to treatment and research in spinal cord injury. The Service is presently involved in a project directed toward the establishment of a regional center which will also serve Nevada, Colorado, Utah and New Mexico. In addition to a specialized air medical transport system, Air Evac, providing for early evacuation, and intensive early treatment of spinal cord injury patients, this project will include a long range follow-up program.

An addition is presently being planned as an expansion at the second floor level, consisting of a 40-foot bay added on the north side running the length of the building from west to east. It will include an x-ray unit, new quarters for the spinal injury unit, a permanent orthotics shop, quarters for pulmonary rehabilitation and expanded gymnasium space for group therapy.

This facility represents a modern progressive approach to the design of a satellite structure for rehabilitation.

# THE REHABILITATION FACILITY DIRECTLY RELATED TO A HOSPITAL

## As a Separate and Autonomous Facility

SPAIN REHABILITATION CENTER
UNIVERSITY OF ALABAMA
IN BIRMINGHAM

**Birmingham, Alabama**

***Architects:***
**Warren, Knight and Davis**

The architectural importance of the Spain Center is that it represents one of the early attempts to develop a rehabilitation facility as a separate element of a teaching hospital. This Center is part of a very large medical complex operated by the University of Alabama in Birmingham which covers more than 40 blocks in its total site. Of the ten existing or proposed hospitals and clinics within the University of Alabama in Birmingham, it is the only one devoted to the rehabilitation of the physically disabled.

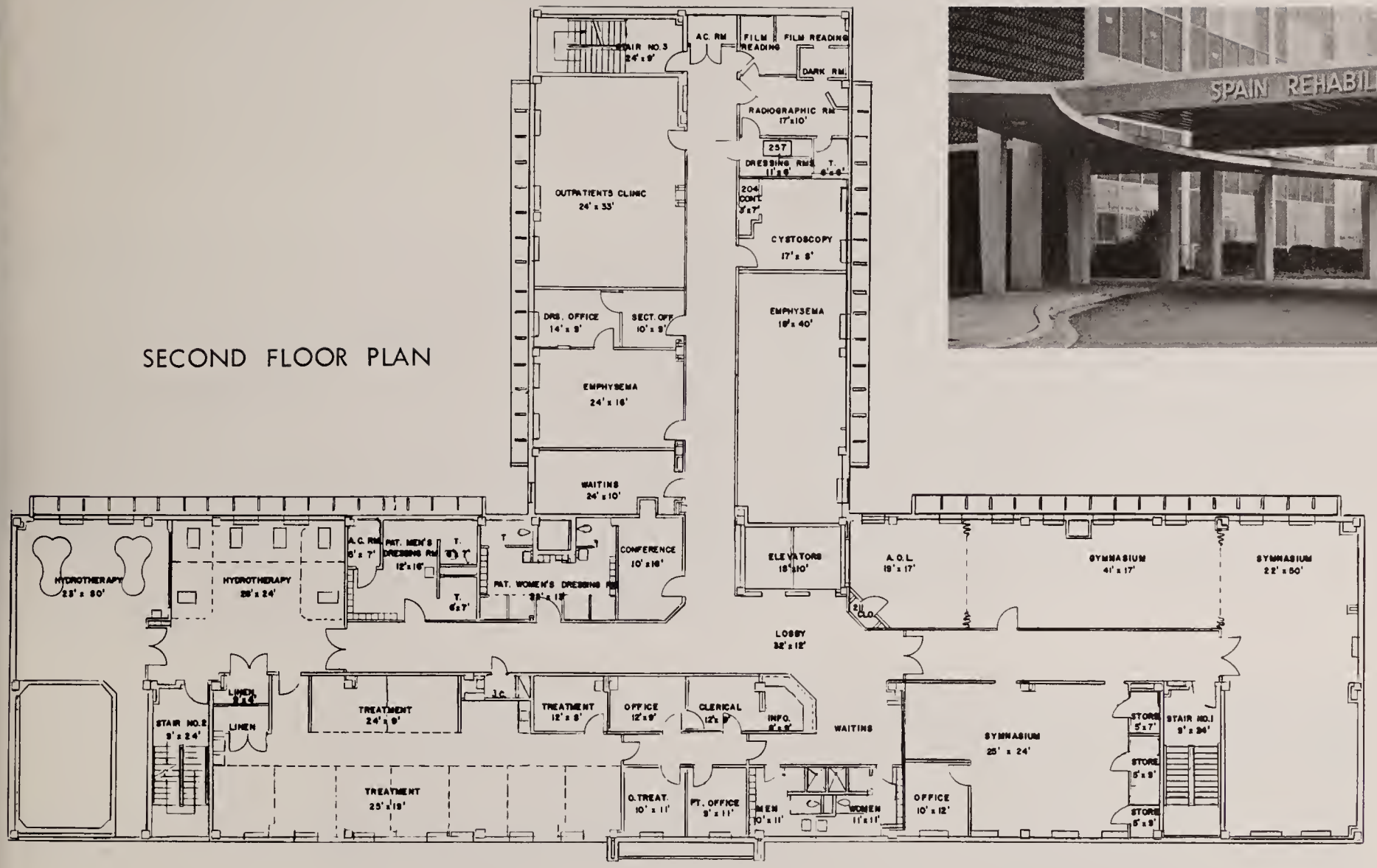
In addition to medical services, this facility provides comprehensive social and vocational rehabilitation services. Also located in the facility is the Research and Training Center which provides not only services to patients but also training in the medical and adjunctive disciplines, and is responsible for research in the rehabilitation process.

The Spain Rehabilitation Center was originally constructed in 1964 as a three-story building. A two story addition was completed in 1969. The basement, first and second floors are devoted to diagnostic and treatment functions, the third and fourth floors to patients' quarters, and the fifth floor houses offices and laboratories.

Aside from certain minor weaknesses in design, the Spain Rehabilitation Center is particularly significant in its position as one element of a large master plan for medical services. As an autonomous unit among a grouping of rehabilitation-type buildings, the relationship of this Center to its medical and service related facilities is worthy of study.

The efficient joint use of staff, central food and other services indicates the future direction for such satellite rehabilitation units in their relationship to the total medical complex.

## SECOND FLOOR PLAN



# THE REHABILITATION FACILITY DIRECTLY RELATED TO A HOSPITAL

## As a Separate and Autonomous Facility

### THE REHABILITATION CENTER GLENDALE ADVENTIST HOSPITAL

**Glendale, California**

***Architects:***
**Fickes and Fickes, A.I.A.**

This Center is similar in certain respects to the Institute at the Good Samaritan Hospital in Phoenix, Arizona. It has a direct concourse and tunnel connection to the main hospital and takes advantage of a sloping site with entrances on both the upper and lower levels. It is a three story separate and autonomous unit of the hospital complex. Three elevators connect all floors.

Completed in 1964, this facility is well planned except for the separation of physical therapy on two floors. Its plan provides well for the accommodation of outpatients and for 24 resident patients. The architecture takes advantage of the climate with the use of generous balconies and a roof garden intended for patient therapy. All elements of rehabilitation therapy and treatment are provided as well as vocational evaluation and speech and hearing clinics. The Center is affiliated with schools of physical and occupational therapy and is involved in rehabilitation research.

As a separate autonomous unit related to an acute care hospital, this facility is representative of the significance of rehabilitation as an important facet in modern medical treatment.

# THE REHABILITATION FACILITY DIRECTLY RELATED TO A HOSPITAL

## As a Separate and Autonomous Facility

In Puerto Rico there has been a development of three regional hospitals and ten subregional hospitals, although not all of the latter have been completed. This regional hospital program is similar to that in operation in Sweden. In each case a comprehensive rehabilitation facility has been located in the area of the regional hospital but with its own identity. This encourages excellent joint use of staff and services. Each facility respects the indigenous architecture of the island, but is modern and efficient, creating an excellent environment for the rehabilitation program.

### CENTRO DE REHABILITACION

**Rio Piedras, San Juan, Puerto Rico**

The Center at Rio Piedras is related to the large medical complex which includes the Regional Hospital, School of Medicine, the City Hospital and the Industrial Workers Hospital. The building, although possibly over designed in its structural content, is an efficient plan which accommodates 40 resident clients and 165 outpatients. It is basically a very compact one story unit. The extra large waiting area is being revised, and the basement space converted to a sheltered workshop. An outdoor recreation and therapy pool is also planned.

### CENTRO DE REHABILITACION

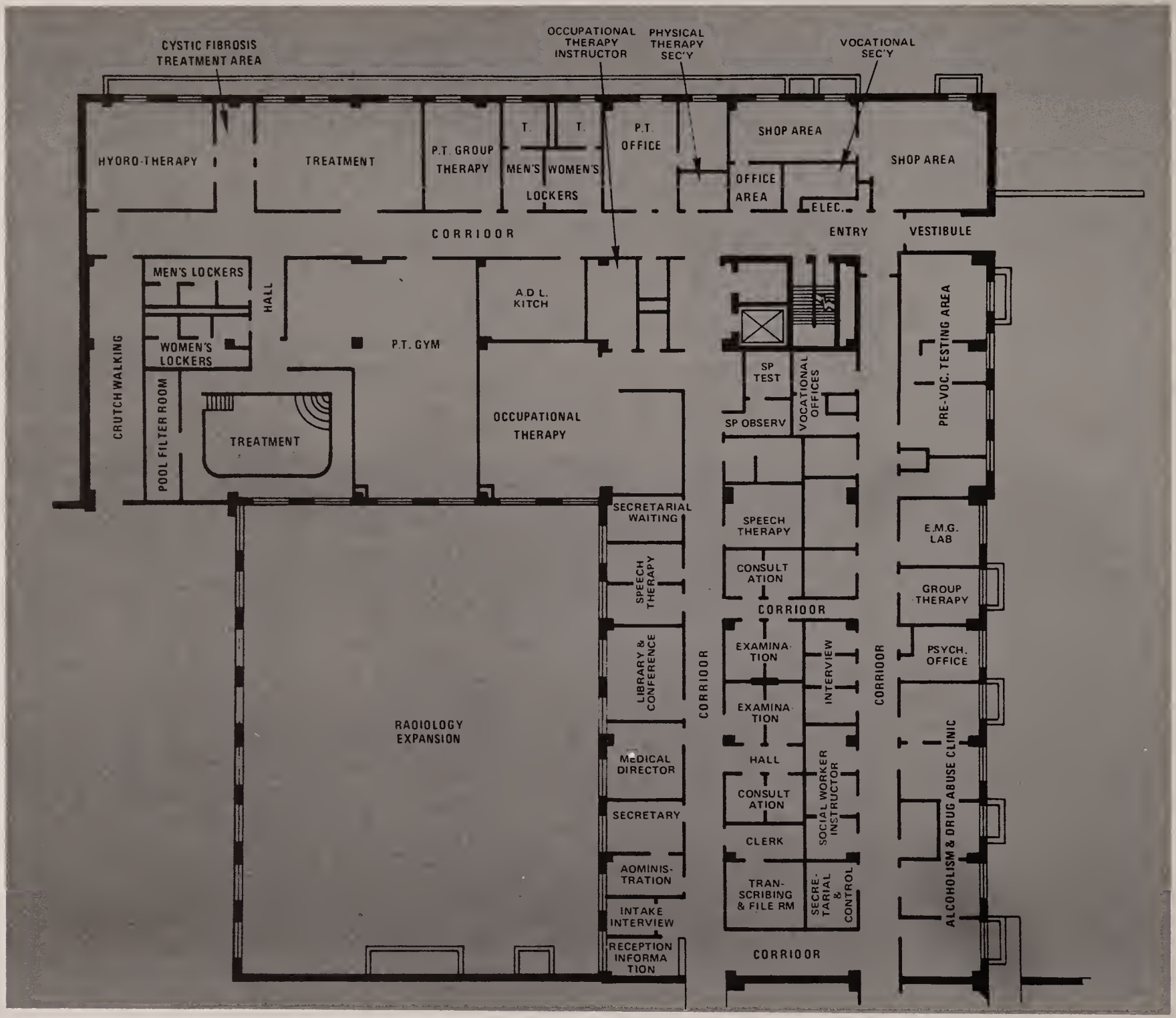
**Ponce, Puerto Rico**

The Center at Ponce is also a one story building developed around a courtyard and related to the Regional Hospital directly to its rear.

# THE REHABILITATION FACILITY DIRECTLY RELATED TO A HOSPITAL

## As a Division Within a Hospital

The medical profession is now giving more attention to "rehabilitation" and its importance in the curative process. Programs of the Federal government which are of assistance in providing services and facilities have helped to develop better rehabilitation programs in hospitals and to focus on the importance of comprehensive rehabilitation. For example, rehabilitation therapy departments are no longer relegated to basement space in hospitals but instead to important central locations within easy access of virtually all nursing areas. This has also stimulated needed research in such diseases as pulmonary disorders, arthritis, and other conditions formerly considered chronic. This change in concept is most noticeable in the principal teaching hospitals.


CYSTIC FIBROSIS TREATMENT AREA
OCCUPATIONAL THERAPY INSTRUCTOR
PHYSICAL THERAPY SEC'Y
VOCATIONAL SEC'Y
HYORO-THERAPY
TREATMENT
P.T. GROUP THERAPY
T.
T.
MEN'S
WOMEN'S
LOCKERS
P.T. OFFICE
SHOP AREA
OFFICE AREA
ELEC.
SHOP AREA
CORRIOOR
ENTRY
VESTIBULE
MEN'S LOCKERS
HALL
A.D.L. KITCH
WOMEN'S LOCKERS
P.T. GYM
CRUTCH WALKING
POOL FILTER ROOM
TREATMENT
OCCUPATIONAL THERAPY
SP TEST
VOCATIONAL OFFICES
SP OBSERV
PRE-VOC. TESTING AREA
SECRETARIAL WAITING
SPEECH THERAPY
CONSULT ATION
E.M.G. LAB
GROUP THERAPY
CORRIOOR
SPEECH THERAPY
EXAMINA TION
INTERVIEW
PSYCH. OFFICE
LIBRARY & CONFERENCE
CORRIOOR
CORRIOOR
EXAMINA TION
RADIOLOGY EXPANSION
HALL
MEDICAL DIRECTOR
CONSULT ATION
SOCIAL WORKER INSTRUCTOR
SECRETARY
CLERK
ALCOHOLISM & DRUG ABUSE CLINIC
AOMINIS-TRATION
TRAN-SCRIBING & FILE RM
SECRE-TARIAL & CONTROL
INTAKE INTERVIEW
RECEPTION INFORMA TION
CORRIOOR

# THE REHABILITATION FACILITY DIRECTLY RELATED TO A HOSPITAL

## As a Division Within a Hospital

DIVISION OF PHYSICAL MEDICINE AND REHABILITATION
UNIVERSITY OF
UTAH MEDICAL CENTER

**Salt Lake City, Utah**

*Architects:*
**Ashton, Evans and Brazier**

This Division, which is a prominent part of the large multistory University Medical Center complex, is one of the newest and best planned rehabilitation facilities designed as an integral part of a teaching hospital. Not only a primary teaching facility for medical students, it is also affiliated with undergraduate programs in many of the other rehabilitation disciplines.

The location, on the main floor directly behind the principal admission area, demonstrates its importance to the total medical center. Therapy, evaluation, research and vocational sections are located on the first floor around an interior court area which is presently being filled in at the first floor level for use as a Radiology Department. On the second floor there are specially designed nursing wards assigned to rehabilitation. The staff is concerned with all areas of rehabilitative treatment and research. There is also a special Alcoholism and Drug Abuse Clinic.

This is a skillfully planned PMR Division, complete in every detail and very progressive in design. As one of the newest medical centers it is a prototype of the facility which can be designed as an integral part of a large hospital and retain its identity.

The University of Utah Medical Center in Salt Lake City is also the center for a planned Regional program which serves the Mountain State Region of Utah, Wyoming, Montana and Idaho. This program has already begun assembling data on facility needs in its region as well as statistics on health characteristics, disability, incidence of disease, etc. Attention is being given to appropriate site selection for new facilities and justification for such planning characteristics.

# THE REHABILITATION HOSPITAL

## RANCHO LOS AMIGOS HOSPITAL

**Downey, California**

Rancho Los Amigos Hospital is a 1,050 bed rehabilitation center for patients with chronic disease and disability. Approximately 700 beds are designated for patients in intensive rehabilitation programs, with the balance used for varying degrees of chronic medical and vocational service evaluation needs. Among the major rehabilitation units are the following categories of disability: spinal cord injury, stroke and neurological disease, amputation and problem fractures, pediatrics, pulmonary, and drug overdose. In addition to the inpatient population, the Clinic Service averages 2,000 patient visits per month.

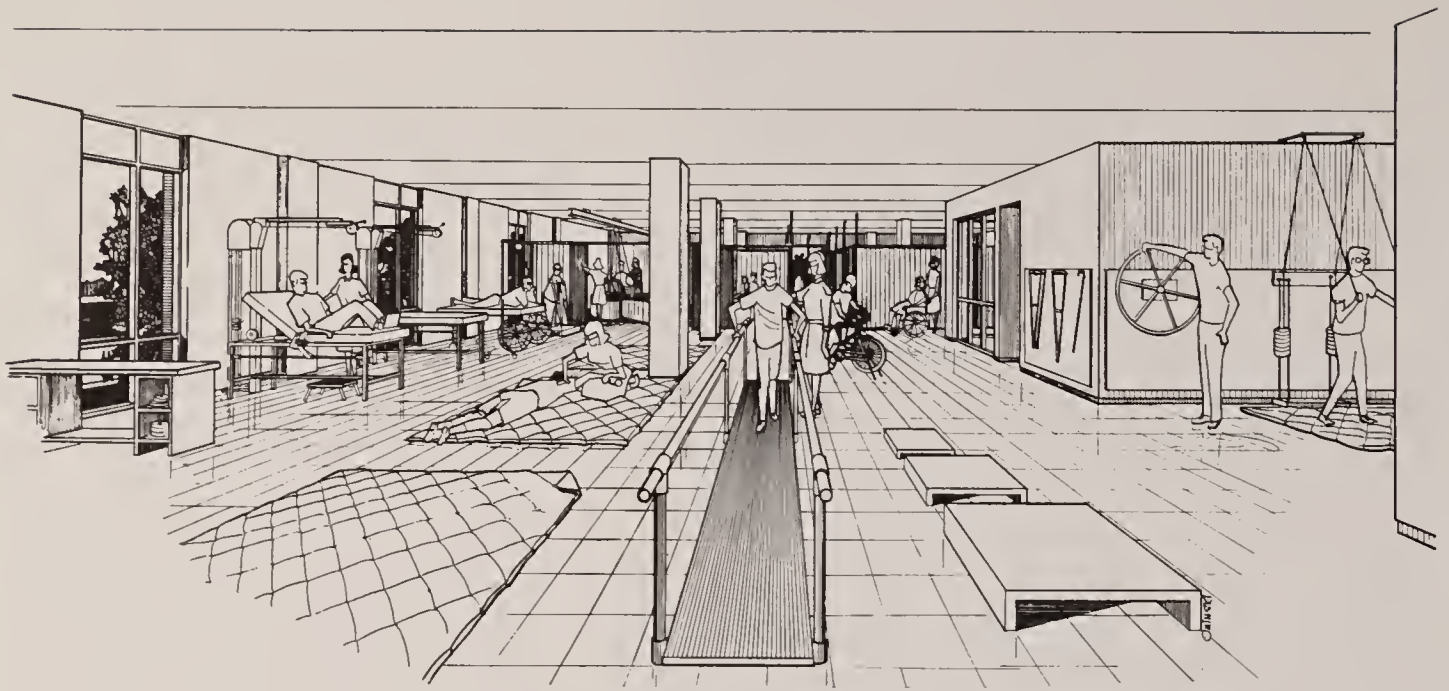
There has been great physical expansion of this facility since its beginning as the County Poor Farm in 1888. The polio epidemic of the 1940s resulted in the development of Rancho Los Amigos as a chronic disease hospital with emphasis on rehabilitation. The older buildings are being phased out and replaced with well planned spacious building groups such as the new Children's Center.

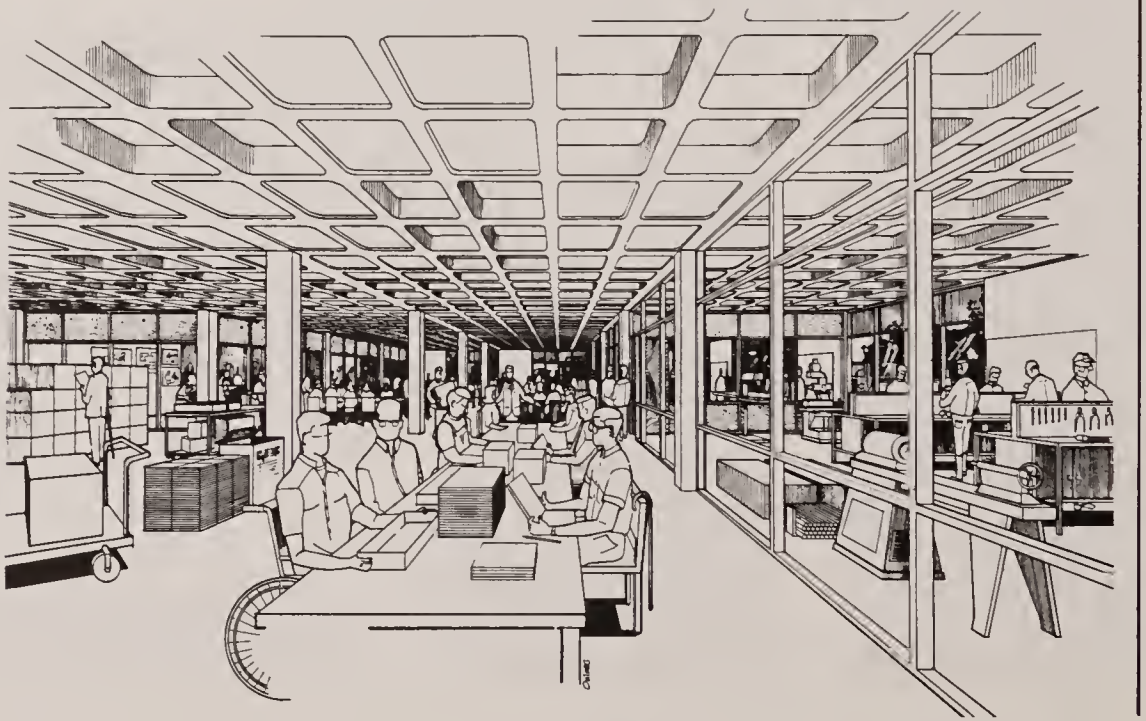
Although primarily medically oriented, Rancho Los Amigos also provides vocational and social services. The vocational development program is currently being evaluated for possible improvement and strengthening.

Rancho Los Amigos is affiliated with university schools of medicine, dentistry, social service and industrial engineering. It also provides training programs in orthotic training for graduate physical and occupational therapists, workshops for professional nurses, and graduate training in psychology and vocational counselling. Extensive clinical research in many facets of chronic disability is carried on by the Medical Science Service, the Medical Engineering Sciences program and the Orthotic Department.

Well conceived and planned expansion should make this facility one of the most comprehensive and progressive in the world.

1. Children's Building
2. Amputee and Stroke
3. Cardiac and Pulmonary Disease
4. Arthritis and Spinal Cord
5. Neurological
6. Diabetes and Chronic Medicine
7. Drug Detoxification
8. Casa Consuela
9. Work Prep. Center—not completed on aerial photo
10. State Vocational Rehabilitation Unit





# Some Special Considerations in the Design of Rehabilitation Facilities

## 1. Time and Motion Studies as a Basis for New Operational Procedures

At least one major rehabilitation and research center in this country is currently investigating the validity of present procedures in the handling of severely disabled clients in therapy areas. The movement of all clients through the daily routine of a normal schedule, a complex problem to analyze, is an important factor in the planning and location of major elements of any facility. Long, unnecessary travel distances can be wasteful for both client and staff. This problem should be systematically analyzed on a time and motion study basis.

## 2. Medical Services Section of a Rehabilitation Facility

The infirmary or medical services section of a rehabilitation facility too often reflects principally the character and design of the usual hospital nursing unit. This is not adequate for the appropriate utilization of this element of the rehabilitation program. On admission, certain clients will need general nursing care, but usually this section should be considered as having a progressively reduced care function. Two stages of reduced nursing care can be planned between intake and the final stage of custodial care, which occurs prior to transfer to the resident dormitory. The zoning of client placement within the building should be carried out on the basis of nursing need

rather than particular disability.

Clients should be encouraged to use the main food service sections except where disability limits this use. Food service in the nursing unit should be by "meal cart" or by flash or infra red cooking in a small preparation area.

The cluster scheme of room arrangement works well in infirmary design and can reduce the need for duplicating nursing stations. In some cases it may be more efficient and productive to use more mobile therapy equipment in the treatment of certain patients, with the therapist and equipment moving to the client's bed rather than the reverse.

Minor operating facilities are necessary but complete X-ray unit and equipment needs can seldom be justified when they are available nearby. The function and design of adequate enema rooms also needs careful review.

## 3. Vocational Training Section

The vocational training department of a comprehensive facility should be designed with careful consideration of its most flexible use. Separation of training areas based on noise problems, dust and dirt controls, as well as fire hazard, must be inherent in any good design. Illumination levels should be related to the vocational task, and electrical and other services should be designed for "station control" either overhead or in floor channels. Interior design should encourage the use of large glass wall areas to open up vocational areas to view. This is one of the prime methods to use in acquainting and interesting various clients in the many fields available to them. It is helpful in stimulating the motivation of the client to test many areas and provides the best kind of open environment for the training center.

## 4. Residential Housing for Rehabilitation Facility Clients

The problem of housing resident clients of a rehabilitation facility is one that deserves special consideration. The traditional use of double-loaded corridor room placement schemes may be economical at times but other solutions offer a more progressive approach to resident housing. College dormitories of recent design have explored the suite or cluster plan which houses 10 to 12 individuals in an identifiable area containing baths and study rooms which insure a modicum of privacy.

The use of multistory or high-rise resident buildings is now becoming more common. This has certain economies built in since it requires far less land per room and conserves building areas. However, high-rise buildings for residential use by disabled persons may develop problems which must be overcome. Safety, psychological reactions, and movement at peak periods on elevators, are among the problems. Proper zoning with respect to disability, careful design with regard to safety, and the use of group cluster arrangements for room organization can minimize these problems.

Time and motion studies could be conducted on such building use to test the validity of the design.

## 5. Recreation Areas

Recreation areas tend to be rather stereotyped and not always relevant to the needs and desires of the client. Basketball courts, pool table and table tennis areas, along with the occasional use of swimming pools, constitute the average facility design for recreation. Creative areas are usually given second place, and new and imaginative programs demanding special design are seldom encountered.

The swimming pool should not be designed as a medium for training Olympic champions in water sports. It should be shaped to allow clients to move slowly from shallow areas to deeper areas. Even the client using a wheel chair should be able to enter the pool without assistance. Diving boards create a hazard and should be eliminated. Underwater lighting can improve the climate of the pool and encourage the timid to actively participate.

One important area needing careful attention is the auditorium-theater, which must have the character and functional areas of both. A great portion of the evening hours are spent in group gatherings in the auditorium, watching movies or listening to music. Seldom does the auditorium have adequate resources for dramatic or musical productions which can be used for both therapeutic and recreational purposes. Seating arrangements must recognize the need for ramps and special areas for the client using a wheel chair or roller bed. Sight lines to compensate for their position can be controlled by tilted platforms or special floor slots.

## 6. Outdoor Areas

Attention should be given to properly landscaping a rehabilitation facility whether it is sited on open land or in a congested urban block. It will enrich the environment for the client and also provide him with outdoor therapy areas for walking and recreation. The development and maintenance of landscaped gardens has been used most successfully in England and Germany for training. This area can be most valuable for training purposes, particularly for epileptics and certain mentally retarded persons. Even interior landscaped courts of reasonable size can be used for such therapy and training. Economical in cost, they do much to improve the environment of any facility.

# Appendix I:

# Other Significant Rehabilitation Facilities (By Category)

## The Comprehensive Rehabilitation Facility

### IN AN URBAN SETTING

New Haven Area Rehabilitation Center
20 Brookside Avenue
New Haven, Connecticut 06519

Crossroads Rehabilitation Center, Inc.
3242 Sutherland Avenue
Indianapolis, Indiana 46205

Rehabilitation Institute, Inc.
261 Mack Boulevard
Detroit, Michigan 48201

Rochester Rehabilitation Center
50 Prince Street
Rochester, New York 14607

### IN A REGIONAL SETTING

Central Alabama Rehabilitation Center.
2125 East South Boulevard
Montgomery, Alabama 36111

Rehabilitation Center of Southern Fairfield Co., Inc.
26 Palmer's Hill Road
Stamford, Connecticut 06902

Kessler Institute for Rehabilitation
1199 Pleasant Valley Way
West Orange, New Jersey 07052

The Betty Jane Memorial Rehabilitation Center
65 Saint Francis Avenue
Tiffin, Ohio 44883

Pennsylvania Rehabilitation Center
727 Goucher Street
Johnstown, Pennsylvania 15905

Allied Services for the Handicapped, Inc.
475 Morgan Highway, R.D. #1
Scranton, Pennsylvania 18508

## The Rehabilitation Facility With Special Disability or Program Emphasis

### FOR COMMUNICATIONS DISORDERS

Community Speech and Hearing Center
P.O. Box 2262, University Station
Enid, Oklahoma 73701

### FOR THE BLIND

Alabama Institute for the Deaf and Blind
P.O. Drawer 17
Talladega, Alabama 35160

Lighthouse for the Blind
1850 W. Roosevelt Road
Chicago, Illinois 60608

South Dakota School for the Blind
Aberdeen, South Dakota 57401

Rehabilitation Center for the Blind
800 West Avenue North
Sioux Falls, South Dakota 57102

Northwest Regional Rehabilitation Center for the Blind
3411 South Alaska Street
Seattle, Washington 98118

### FOR THE MENTALLY RETARDED AND EMOTIONALLY DISTURBED

Arkansas Children's Colony
Conway, Arkansas 72032

Laradon Hall School for Exceptional Children
East 51st Avenue and Lincoln Drive
Denver, Colorado 80216

Parsons State Hospital and Training Center
26th and Gabriel
Parsons, Kansas 67357

Granite Special Education Habilitation Center
340 East 3545 South
Salt Lake City, Utah 84115

Central Wisconsin Colony and Training School
317 Knutson Drive
Madison, Wisconsin 53704

### FOR REHABILITATION RESEARCH

University of Arkansas Vocational Rehabilitation Research and Training Center
Hot Springs Rehabilitation Center
Hot Springs, Arkansas 71901

Institute of Rehabilitation and Chronic Diseases
University of California at Los Angeles
Los Angeles, California 90024

Emory University Medical Rehabilitation Research and Training Center
80 Butler Street S.E.
Atlanta, Georgia 30303

### THE WORKSHOP

Utility Workshop of Denver
1212 Delaware Street
Denver, Colorado 80204

Goodwill Industries—Suncoast, Inc.
P.O. Box 10398
Saint Petersburg, Florida 33733

Sheltered Workshop and Occupational Training Center
1138 Garvin Place
Louisville, Kentucky 40203

The Opportunity Workshop, Inc.
512 West 78th Street
Minneapolis, Minnesota 55423

## The Rehabilitation Facility Directly Related to a Hospital

### AS A SEPARATE AND AUTONOMOUS FACILITY

Ginsberg Rehabilitation Center
c/o Fort Wayne State Hospital and Training Center
801 East State Boulevard
Fort Wayne, Indiana 46805

Rehabilitation Center
Saint Lukes Methodist Hospital
1026 A Avenue N.E.
Cedar Rapids, Iowa 52400

Younker Memorial Rehabilitation Center
Iowa Methodist Hospital
1200 Pleasant Street
Des Moines, Iowa 50308

Irene Walter Johnson Rehabilitation Institute
509 S. Euclid Avenue
Washington University
Saint Louis, Missouri 63110

### AS A DIVISION WITHIN A HOSPITAL

Department of Rehabilitation Medicine
Memorial Hospital of Long Beach
2801 Atlantic Avenue
Long Beach, California 90801

Rehabilitation Unit
University of California Medical Center
3rd and Parnassus Avenue
San Francisco, California 94122

Rehabilitation Unit
Memorial Hospital of Chatham County
63rd and Waters Avenue
Savannah, Georgia 31405

Rehabilitation Unit
University of Kentucky College of Medicine
Lexington, Kentucky 40506

Rehabilitation Services Department
Massachusetts General Hospital
Fruit Street
Boston, Massachusetts 02114

Department of Physical Medicine and Rehabilitation
University of Michigan Hospital
1405 East Ann Street
Ann Arbor, Michigan 48104

Rehabilitation Department
Montefiore Hospital and Medical Center
111 East 210th Street
Bronx, New York 10467

## The Rehabilitation Hospital

Craig Rehabilitation Hospital
3425 South Clarkson
Englewood, Colorado 80110

Gaylord Hospital
Gaylord Farm Road
Wallingford, Connecticut 06492

# APPENDIX II

## Selected References on Planning and Design of Rehabilitation Facilities

### GENERAL

**American Standards Association (now U.S.A. Standards Institute),**

*American Standard Specifications for Making Buildings and Facilities Accessible to, and Usable by, the Physically Handicapped.* 1961. 11 pp., figs. Single copies available free from National Easter Seal Society for Crippled Children and Adults, 2023 W. Ogden Ave., Chicago, Ill. 60612.

Gives details of specifications for building approaches, ramps, doorways, floor surfaces, drinking fountains, telephone, and warning signals.

**British Standards Institution,**

*Access for the Disabled to Buildings; Part 1: General Recommendations.* 1967. 28 pp., tabs. (British Standard Code of Practice; CP 96: Part 1: 1967) Available from the Council for Codes of Practice, British Standards Institution, British Standards House, 2 Park St., London, W. 1, England. $2.00.

Defines categories of disability and types of buildings covered by the Code (individual dwelling units excluded); makes general recommendations on design principles and provisions, with 10 pages of diagrams illustrating design principles.

**Florida Division of Vocational Rehabilitation,**

*The Comprehensive Rehabilitation Center; A Rehabilitation Unit in a General or Special Hospital; General Architectural Principles for Rehabilitation Facilities,* by Roy M. Hoover, M.D. (Ideal Service Series, Vol. 1) 1967. 37

pp. Enquire of D. Allen Brabham, Coordinator, Rehabilitation Facilities Planning, Florida Division of Vocational Rehabilitation, 725 S. Bronough St., Tallahassee, Fla. 32304.

The 3 chapters in this booklet are intended to help communities to identify the kind of rehabilitation facility that might best be planned to fit their needs and resources. The third chapter briefly outlines criteria for the physical plant.

**Goldsmith, Selwyn,**

*Designing for the Disabled; 2d ed.*, revised and expanded. 1967. 207 pp., figs., diags. Published by the Royal Institute of British Architects, 66 Portland Place, London, W. 1, Eng. 3 pounds, 10 s. Distributed in the U.S. by McGraw-Hill Book Co., 330 W. 42nd St., New York, N.Y. 10036, $15.00

Research conducted since publication of the first edition has caused Mr. Goldsmith to change his philosophy in regard to the "normality and independence" of the physically handicapped. This revision places the emphasis more on public buildings than on domestic housing. This book is one of the landmarks in designing for the handicapped.

**National Research Council, Canada,**

*Buildings Standards for the Handicapped*, 1965, by the Association Committee on the National Building Code . . . 1965. 20 pp., figs. (NRC no. 8333 suppl. no. 7, Natl. Building Code of Canada) Available from: The Secretary, Associate Committee on the National Building Code, National Research Council, Ottawa, Canada. 25¢.

A guide to the design and construction of buildings with provision for making them accessible to the physically handicapped without assistance. Recommendations concern safety factors to be incorporated in public buildings and, particularly, in buildings for industry.

**Rogerson, Robert W. K. C. and Spence, Philip H.,**

*A Place at Work: The Working Environment of the Disabled.* 1970. 207 pp., diags., floor plans. Published by the Scottish Branch, British Red Cross Society, and available from Robert MacLehose and Co. Ltd., University Press, Glasgow, W. 3, Scotland. 3 pounds.

This publication resulted from a sponsored visit to Western Europe by the authors. Beginning with schools and progressing to problems of evaluation of the person's capabilities, it includes an examination of medical treatment and rehabilitation, special features for therapy and a chapter on design and equipment for sheltered workshops. Intended primarily for architects.

**Salmon, F. Cuthbert and Salmon, Christine F.,**

*Rehabilitation Center Planning; An Architectural Guide*, 1959, 192 pp., illus., figs., floor plans. Pennsylvania State University Press, University Press Building, University Park, Pennsylvania 16802. $15.50.

Also a basic reference work, this begins with a definition of rehabilitation, and carries the general planning concept through the design of the various departments of a comprehensive rehabilitation facility. Should be particularly valuable to the architect involved in the design of a rehabilitation facility for the first time.

**U.S. Department of Health, Educatjon and Welfare, Social and Rehabilitation Service, Office of Research, Demonstrations and Training.**

*Research 1970: An Annotated List of Research and Demonstration Grants 1955-1969.* 1970. 263 pp., U.S. Government Printing Office, Washington, D.C. 20402. May be obtained from Research Utilization Branch, Division of Research and Demonstration Grants, Social and Rehabilitation Service, U.S. Department of Health, Education and Welfare, Washington, D.C. 20201.

This publication includes listings of a number of projects related to the planning of rehabilitation facilities. (Upon completion of each project, a final report has been prepared by the grantee, giving the results of the investigation or demonstration. Copies of these reports, as well as of other publications produced under the project, may be obtained by writing directly to the grantee.)

## SPECIAL DISABILITY OR PROGRAM EMPHASIS

**Bryant, Daniel C.,**

*Designing for the Mentally Handicapped.* 1964. 3 pp. (Reprint from: *Rehab. Lit.*, Nov., 1964) National Easter Seal Society for Crippled Children and Adults, 2023 W. Ogden Ave., Chicago, Ill. 60612. 10¢.

Design elements to be considered in planning a school or training center for the mentally retarded, specifically those planned into the Shore School and Training Center in Evanston, Ill., a total training and vocational adjustment center opened in 1962 and now being enlarged.

**Human Resources Center,**

*The Modification of Educational Equipment and Curriculum for Maximum Utilization by Physically Disabled Persons; Design of a School for Physically Disabled Students.* By Harold E. Yuker (and others). 1967. vii, 30 pp. illus. (Human Resources Study no. 8) Distributed by Human Resources Center, Albertson, L.I., N.Y. 11507.

One of a series of monographs dealing with various aspects of special education for the severely disabled.

**National Mental Health Materials Center,**

*Planning, Programming, and Design for the Community Mental Health Center.* A project sponsored by the National Institute of Mental Health, U. S. Public Health Service. 1966. 104 pp. illus., figs., floor plans, charts. Mental Health Materials Center, Inc., 419 Park Avenue South, New York, N.Y. 10016.

Limited number of copies available from Community Mental Health Service Support Branch, National Institute of Mental Health, Parklawn Bldg. 11-C-06, 5600 Fishers Lane, Rockville, Maryland 20852.

Presents a method for communities to plan for mental health services. The information is presented in continuing dialogue between mental health professionals and architects involved in the planning, programming and design of a community mental health center for a San Francisco community. Theories, concepts and experimental programming of nationwide community mental health programs are measured in terms of one community.

———————,

*Architecture for the Community Mental Health Center,* a project sponsored by the National Institute of Mental Health, U.S. Public Health Service. 1967. 168 pp. illus., figs., floor plans, charts. Mental Health Materials Center, Inc., 419 Park Avenue South, New York, N.Y. 20016. Limited number of copies available from Community Mental Health Service Support Branch, National Institute of Mental Health, Parklawn Bldg. 11-C-06, 5600 Fishers Lane, Rockville, Maryland 20852.

Under a grant from NIMH, in cooperation with the School of Architecture, Rice University, Houston, Texas, six teams of architectural and mental health specialists collaborated to seek answers to programming of six community mental health centers and the architectural approach and solution to each. The six communities selected for this study were classified as follows: (1) metro-suburban rural, (2) research-oriented, (3) urban slum ghetto, (4) state and general hospital association, (5) midwestern rural, and (6) heterogeneous urban.

**New York University Medical Center. Institute of Rehabilitation Medicine,**

*The Design of a Pre-school "Learning Laboratory" in a Rehabilitation Center,* by Ronnie Gordon. 1969. 61 pp. illus., figs. Spiral binding. (Rehab. monograph) Institute of Rehabilitation Medicine, 400 E. 34th St., New York, N.Y. 10016. $3.00.

The preschool program at IRM is designed to fulfill therapeutic, diagnostic, and evaluative research and teaching roles. Details are given of the room, space allocations for activities, a window unit, housekeeping unit, easel and workbench accessible to multihandicapped children, furniture with insets for wheelchairs, and the use of hand rails.

**Reidy, John P.,**

*Zone Mental Health Concepts: The Illinois Concept.* 1964. 172 pp. diags., floor plans, charts. Charles C. Thomas, Publisher, 301-327 E. Lawrence Avenue, Springfield, Ill. 62703. $4.00.

This is a narrative description of the architectural planning of seven mental health centers in Illinois. It includes analyses of the problems of relating architectural design to topography, geography and climate, and illustrates how a basic functional concept can be modified in each situation.

**Salmon, F. Cuthbert and Salmon, Christine F.,**

*Sheltered Workshops; an Architectural Guide,* 1966. 133 pp. illus., charts, diags., floor plans. Paperbound. Office of Engineering Research, Oklahoma State University, Stillwater, Okla. 74075. 90¢.

Describes the role of the sheltered workshop in the community and provides programming and planning information specific to this type of building. Applications of architectural planning principles are illustrated; since no two workshops are alike, there is no attempt to establish standards.

**Schoenbohm, Wilko B.,**

*Planning and Operating Facilities for Crippled Children.* 1962. 311 pp. illus., figs., floor plans, diags. Charles C. Thomas, Publisher, 301-327 E. Lawrence Ave., Springfield, Ill. 62703. $11.50.

Specifications with illustrations and references for planning a hospital-school for crippled children, non-residential school, treatment facilities, and camping facilities.

**The Woodrow Wilson Rehabilitation Center Foundation,**

*The Student Activities Building at Woodrow Wilson Rehabilitation Center,* 1968. 29 pp. illus., diags., figs., floor plans, charts. Spiral binding. The Woodrow Wilson Rehabilitation Center Foundation, 806 S. Lee St., Alexandria, Va., 22314. $2.00.

Presents the philosophy underlying the concept of a building devoted to recreational and social uses, the planning and architectural execution; includes an analysis of the utility of the various components of the building and some suggestions for improvement.



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HV1650 Fitz Patrick, Thomas K.
F582 Selected rehabilitation facilities in the United
c.a. States: an architect's analysis.

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